FINAL SUBSURFACE INVESTIGATION REPORT
AAFE MIXED-USE BUILDING
FLUSHING, NEW YORK

JCJ Architecture
404 Fifth Avenue, 3rd Floor
New York, NY 10018

Mueser Rutledge Consulting Engineers
225 W. 34th Street, 14 Penn Plaza
New York, NY 10122

January 13, 2017

built on firm foundations

PARTNERS
Peter W. Deming
Roderic A. Ellman, Jr.
Francis J. Arland
David R. Good
Walter E. Kaeck

ASSOCIATE PARTNERS
Tony D. Canale
Jan Cermak
Sitotaw Y. Fantaye

SENIOR ASSOCIATES
Domenic D'Argenzio
Robert K. Radske
Ketan H. Trivedi
Hiren J. Shah
Alice Arana
Joel L. Volterra
Frederick C. Rhyner
Steven R. Lowe
Andrew R. Tognon
Gregg V. Piazza
James M. Tantalla
T. C. Michael Law

ASSOCIATES
Douglas W. Christie
Pablo V. Lopez
Andrew Pontecorvo
Renzo D. Verastegui
Alex Krutovskiy
Srinivas Yenamandra
Farid F. Vastani
Jesse L. Richins
Jong W. Choi
Raj S. Chinthamani
Andrew R. Klaetsch
Peter L. Madarasz

TECHNICAL SPECIALISTS
David M. Cacoilo
Alfred H. Brand
James L. Kaufman
Hugh S. Lacy
Joel Moskowitz
George J. Tamaro
Elmer A. Richards
John W. Fowler

FINANCE DIRECTOR
Joseph N. Courtade

MARKETING DIRECTOR
Martha J. Huguet

January 13, 2017

JCJ Architecture
404 Fifth Avenue, 3rd Floor
New York, NY 10018

Attn: George Chin

Re: Final Subsurface Investigation
AAFE Mixed-Use Building
Flushing, Queens, New York
MRCE File 12629

Dear Mr. Chin,

In accordance with our revised proposal, dated January 14, 2016, we have completed our final subsurface investigation for the referenced project comprising construction of a new, mixed-use building in Flushing, Queens, New York. This report summarizes the results of our final boring program, including additional observations and interpretation of subsurface conditions, and notes any revisions to recommendations provided for foundation design and construction in our October 2016 Preliminary Geotechnical Report.

EXHIBITS

The following exhibits are attached:

Drawing No. S-1	Site Location Plan
Drawing No. B-1	Boring Location Plan
Drawing No. GS-1	Geologic Section A-A
Drawing No. GS-2	Geologic Section B-B
Drawing No. GS-R	Geotechnical Reference Standards
Appendix A	MRCE Final Boring Logs
Appendix B	Adjacent Building Records

PROJECT DATUM

Elevations herein are referenced to the North American Vertical Datum (NAVD 1988) where El. 0.0 is 1.625 feet below the Queens Borough Datum.

EXISTING SITE CONDITIONS

The project site is located at 133-04 39th Avenue in Flushing, Queens, New York, at the southeast corner of College Point Boulevard and 39th Avenue as shown on Drawing No. S-1. The site comprises Block 4973, Lot 6 with a total area of about 13,388 square feet (sq. ft.). The formerly existing structures were demolished to grade and the parking lot surface removed in November 2016.

The site is generally level at around El. +45. A concrete retaining wall supports a

drop of about 6 to 7 feet between the site lot and the gas station lot to the south. The west sidewalk also slopes down from north to south to accommodate this grade change with a retaining wall constructed along the west property line to maintain fairly level site grades.

SITE GEOLOGY

Bedrock was not encountered in any of the borings at the site. According to published data, bedrock lies about 200 feet below ground surface. The oldest and lowest sediments overlying bedrock are of Cretaceous age followed by Pleistocene age glacial deposits.

The site is at the edge of a deep valley carved into the Cretaceous Raritan clay. During the Pleistocene, a series of glaciers flowed across the region. The glaciers scoured the valley deeper, reworked the clay, and redeposited it as glacial sediments. With each advance and retreat, the ice typically deposited in and along the valley layers of till that may contain large slabs of Raritan clay, outwash sand and glacial lake silt and clay derived in part from the Raritan. In the process, the ice glacially sheared and loaded the older sediments below, densifying them, before depositing less dense soil above. Surficial fills placed by man to level and develop the site and surrounding area overlie the natural soil formations.

SUBSURFACE INVESTIGATION

MRCE proposed a phased investigation consisting of six borings made in two phases (preliminary and final phase) to expedite the start of foundation design and satisfy NYC Building Code requirements for subsurface exploration. The preliminary investigation was intended to consist of five borings made in accessible areas (parking lot and sidewalk) and provide sufficient subsurface data to initiate foundation design. Subsurface data available from prior site investigations allowed reduction in the number of preliminary borings from five to three and addition of three Cone Penetration Test (CPT) soundings to assist in the preliminary investigation. CPT soundings provide a continuous record of soil strength and stiffness with depth and were added to facilitate a better evaluation of foundation performance during building design. We refer to our October 2016 Preliminary Subsurface Investigation Report for details of the previous investigations and findings.

The final subsurface investigation was performed following demolition of existing buildings in November 2016 and included two additional borings. A test pit was also planned as part of the final investigation to investigate the depth and character of foundations supporting the adjacent building along the east side of the site. However, the test pit was deleted from the final investigation following a records search in the Department of Buildings (Queens) which produced foundation design drawings for the adjacent building (See Appendix B).

MRCE Final Phase Investigation

Two additional borings (Borings MR-4P and MR-5U) were made in the southeast quarter of the site where former structures previously prevented access for drilling. The borings were drilled by Craig Test Boring, Inc. of Mays Landing, New Jersey on December 15th, 2016 under the continuous inspection of our Engineer, Mr. Eric Poon. As-built locations of the borings were determined by our Engineer by measuring distances from property features and are shown on Drawing No. B-1.

Borings were advanced with a truck-mounted CME 75 drill rig using wash-rotary methods with casing and biodegradable drilling mud to stabilize the borehole. Soil samples in MR-4P were collected continuously from ground surface to a depth to 12 feet and at five foot intervals thereafter. Soil samples in MR-5U were collected at five foot intervals from ground surface to end of boring. Soil samples were obtained by performing Standard Penetration Tests (SPT), where a standard, 2-inch O.D. split-spoon sampler is driven through four 6-inch intervals with a 140-pound hammer, free-falling 30 inches. The SPT resistance, also termed N-value and expressed in blows per foot (bpf), is an indication of the relative density of the

material sampled and is calculated by summing the blows from the second and third 6-inch intervals. In some instances, where the sampler was unable to penetrate the full 24 inches due to the presence of dense soils, large gravel, cobbles, boulders, or other obstructions, the sampler was driven until refusal (i.e. 50 to 100 blows were administered) and the actual penetration of the sampler was measured and recorded. Recovered soil samples were classified in the field in accordance with the Unified Soil Classification System (USCS) and placed in jars for preservation and transport to our laboratory.

One undisturbed sample was taken of the Stratum C clay encountered in Boring MR-5U by mechanically pushing a 3-inch diameter tube using a Shelby tube sampler. The length of push and recovery of the tube sample is recorded in the boring log for MR-5U in Appendix A. Upon recovery, the tube sample was sealed with hot wax and plastic end caps for sample preservation and transported to our laboratory. The recovered sample was classified in the field in accordance with the Unified Soil Classification System (USCS) and transported to our laboratory.

A deep well-point piezometer was installed in MR-4P at completion to monitor water levels. The piezometer consisted of two inch I.D. PVC standpipe installed to a depth of 75 feet. The bottom ten feet of the standpipe is slotted and surrounded by filter sand to allow free water movement into the piezometer without movement of soil particles. A falling head test was performed by filling the standpipe with water and measuring the drop in water level with time to ensure proper operation of the well. Logs of the completed borings are provided in Appendix A.

LABORATORY TESTING PROGRAM

All soil samples were delivered to our soil mechanics laboratory in Manhattan. Samples were reviewed and field descriptions were revised as necessary for conformance with MRCE's Geotechnical Reference Standards, described on Drawing No. GS-R. Individual sample descriptions are provided on the final, typed boring logs in Appendix A.

Index Testing: Natural water contents were determined on all fine-grained soil (silt and clay) samples. The results of the water content determinations are included on the boring logs in Appendix A. Water contents are expressed as a percentage of the sample dry weight.

SUBSURFACE CONDITIONS

We have updated soil strata descriptions from our October 2016 Preliminary Geotechnical Report to incorporate the results of the final borings. General descriptions of each of the strata, including material classification (Class) in accordance with the New York City Building Code (2014), are summarized below in order of their occurrence with depth. We refer to Geologic Sections A-A and B-B on Drawing Nos. GS-1 and GS-2 for a graphical representation of the variation in soil strata across the site.

Stratum F – Fill (NYC Class 7): The site is covered with fill comprised of natural soils reworked or transported by man. The fill ranges from loose to medium compact, brown fine to coarse sand, some to trace silt, trace to some gravel, trace brick to soft brown clayey silt, some to trace coarse to fine sand. The fill thickness is expected to vary across the site as it ranged between 8 and 13.5 feet in the MRCE borings. N-values range from 6 to refusal with an average of 13 bpf. The erratic sampling resistance indicates uncontrolled fill placement with the higher N-values typically the result of large gravel, cobbles, boulders or other obstructions within the fill. Remnant foundations and local concentrations of construction debris are also expected within the fill from prior site construction and the completed demolition of site structures.

Stratum S – Sand (NYC Class 3b): Sand underlies the fill in all borings and is interlayered with the underlying Stratum C clay (described below) in Borings MR-1 and MR-3U. Stratum S consists of loose to medium compact, brown fine to medium to fine to coarse sand, trace to some silt, and trace gravel. The

thickness of the sand ranges from 35 feet in MR-2U to between 2.5 and 15 feet where the sand is interlayered with Stratum C clay in MR-1 and MR-3U. N-values range from 4 to 36 bpf and average 17 bpf.

Stratum C – Silty Clay (NYC Class 4b): Stiff to hard clay exists below and is typically interlayered with the sand in all borings except Boring MR-4P made in the southeast corner of the site. Stratum C consists of stiff to hard brown, red-brown and gray silty clay, sometimes interlayered or varved with clayey silt, silt or fine to medium sand seams. In MR-2U, Stratum C underlies the Stratum S sand and is ten feet thick. In borings MR-1 and MR-3U, Stratum C is interlayered with Stratum S and ranges in thickness from five to 17.5 feet. The top of Stratum C varies from 23.5 feet (El. +15) in MR-3U to 48.5 feet (El. -4) in MR-2U. N-values range from 14 to 53 bpf with an average of 26 bpf. Natural water contents range from 25 to 40 percent, with an average value of 31 percent.

Slickensides are evident in many Stratum C samples. Slickensides in a soil are secondary structures that result from prior friction along a fault plane and are found in cohesive material that was disturbed or locally reworked after deposition. These slickensides then become irregular planes of weakness which affect the clay strength. Compression tests on undisturbed samples of Stratum C indicate a range in clay shear strength between 1.9 and 2.1 kips per square foot (ksf).

The consolidation tests indicate that the clay stratum is moderately to heavily over-consolidated with an over-consolidation ratio (OCR) greater than 4. The OCR is the ratio of the pre-consolidation pressure as determined from consolidation testing to the estimated existing overburden pressure at the sample depth.

Stratum T – Till (NYC Class 3a): Glacial till underlies the clay deposits. Stratum T consists of medium compact to very compact, brown to gray fine to coarse sand, trace to some silt with layers and pockets of clayey sand and trace gravel, lignite. The top of the till ranges in depth from 43.5 feet (El. +1) in MR-4P to 58.5 feet (El. -14) in MR-2U. N-values vary between 24 and 107 bpf with an average of 58 bpf. Three fine-grained till samples encountered in Borings MR-1 and MR-3 show an average water content of 21 percent.

Groundwater: Groundwater levels were typically measured during borehole advance and are shown on the boring logs and geologic sections. Borehole levels may not represent stabilized water levels and therefore may not be indicative of the groundwater regime.

Groundwater levels measured in January 2017 in the deep piezometer MR-4 range from a depth of 47.9 to 49.7 feet below the standpipe rim, or between El. -2.0 and El. -3.8. In comparison, ground water levels measured in the shallower environmental monitoring wells installed by Roux Associates, Inc. in June 2016 range from a depth of 35 to 36.5 feet below ground surface, or between about El. +8.3 and El. +9.7.

The deeper water levels measured in January 2017 are attributed to on-going dewatering for a deep excavation in progress across the street from the AAFE project site at the northeast corner of the intersection of 39th Avenue and College Point Boulevard. We understand that the adjacent excavation requires groundwater lowering of about twenty (20) feet, or to about El. -10. It is likely, given the granular deposits and discontinuous nature of the clay strata at the AAFE site, that this work has affected the groundwater levels at the Project site. However, water perched at the top of the Stratum C clay is still anticipated even with on-going dewatering and may result in groundwater encountered at higher elevation in excavations at the Project site.

Groundwater levels are expected to vary seasonally throughout the year depending on precipitation levels and surface water infiltration. As such, the groundwater level at the time of construction may be different from levels observed during our field investigations.

FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

The results of the final subsurface investigation are generally consistent with the findings of our preliminary investigation. Foundation recommendations in our October 2016 Preliminary Report therefore remain applicable. Recommendations below are intended to enhance or supplement our prior recommendations:

1. ***Soil Profile:*** The additional borings (MR-4P and MR-5U) further demonstrate the variability of the natural soils within the proposed depth of excavation. The Stratum C clay is interlayered with the Stratum S sand and locally missing in some areas. However, soils at mat subgrade are expected to consist of predominantly of the stiff to hard clays of Stratum C. These sensitive soils are susceptible to softening and disturbance by construction operations, particularly in the presence of water or freezing weather.

   Proper performance of the mat foundation requires support on undisturbed soil subgrade. Final subgrade exposure must be made using a smooth edged excavating tool, such as a backhoe or bucket with the teeth shielded, and operating by reach of equipment and working on mats or at least two feet above subgrade. All water must be diverted away from and not allowed to pond in excavations. Mat construction should either proceed immediately after subgrade approval or subgrade promptly covered with a lean concrete mud to protect subgrade materials from subsequent deterioration from weather, surface water infiltration and construction traffic in the interim period until foundation construction

2. ***Groundwater:*** The deep piezometer MR-4P installed in the final investigation indicates that the adjacent construction at the site across 39th Avenue has lowered groundwater levels significantly at the site. However, the duration of this on-going work is unknown and such lowered site water levels should not be counted on during construction of the proposed AAFE project. In any event, even with on-going dewatering at the adjacent site, perched water at the top of the Stratum C clay is still anticipated and may result in groundwater encountered at higher elevation in excavations at the Project site. Dewatering considerations in our October 2016 Preliminary Report therefore remain applicable.

3. ***Mat Foundation Settlements:*** Incorporating the results of the final investigation in our settlement models confirms our prior recommendation that the design of the foundation mat should accommodate a differential settlement of one (1) inch between the center and corner of the mat.

4. ***Underpinning and Protection of Adjacent Structures:*** The adjacent building abutting the east property line has a single cellar level estimated at a depth of about 14 feet. From documentation found at the Department of Buildings (Queens), the adjacent building is supported on a narrow strip footing at a depth of approximately 15 feet (El. 30) below current site grades. In comparison, excavation for new building construction will require excavation to a depth of about 30 feet to general subgrade (El. 13.5) and locally deeper to 36 feet (El. 7.5) for elevator construction along the east property line. Underpinning of the adjacent foundations is therefore necessary. Underpinning will require obtaining permission from adjacent property owners which must be negotiated in advance of construction.

5. ***Permeation Grouting:*** The adjacent property along the east building line consists of a series of narrow buildings (13 to 14 feet wide) supported on shallow foundations bearing near the top of the Stratum S sands. The narrow width of the building places the footings supporting the common wall between the adjacent and neighboring building within the influence zone of the deep AAFE excavation. Permeation grouting of the Stratum S sand beneath the building is therefore recommended prior to underpinning to stabilize the sands, avoid ground loss and thereby mitigate movement of the adjacent buildings during underpinning and subsequent

excavation for foundation construction. Permeation grouting using sodium silicate grout is recommended due to the variable character of the Stratum S sands.

GEOTECHNICAL REVIEW OF FOUNDATION DESIGN & CONSTRUCTION

The borings disclose a complex subsurface profile with interlayered sands and clays expected at and below foundation subgrade. This variable profile may result in foundations bearing on soil of different character and thickness. Interaction between the geotechnical and structural engineer is therefore essential as foundation design progresses to optimize building foundations and provide adequate building performance under the range in service loading conditions. Geotechnical review and assistance in preparation of foundation plans and specifications for below grade work is also recommended so that foundation and construction recommendations provided herein are properly interpreted and implemented in the design.

Recommendations for foundation design and construction in this report are based on the information obtained from the borings and associated field and laboratory testing. However, conditions on the site may vary between discrete boring locations and observed at the time of our subsurface exploration. The nature and extent of variations between borings may not become evident until exposed in construction. Geotechnical observation of foundation construction and testing is recommended to provide an opportunity to observe soil conditions and behavior as exposed during construction, evaluate the applicability of the recommendations provided in this report to the soil conditions encountered, and recommend appropriate changes in design or construction procedures if conditions differ from those described herein. We recommend that all foundation construction be observed by a qualified geotechnical engineer in accordance with the requirements of the NYC Building Code.

CLOSURE

This report presents the results of our investigations and our recommendations for foundation design and construction for the proposed project. We will be pleased to answer questions regarding this report and further assist in design and construction of the project as you may request.

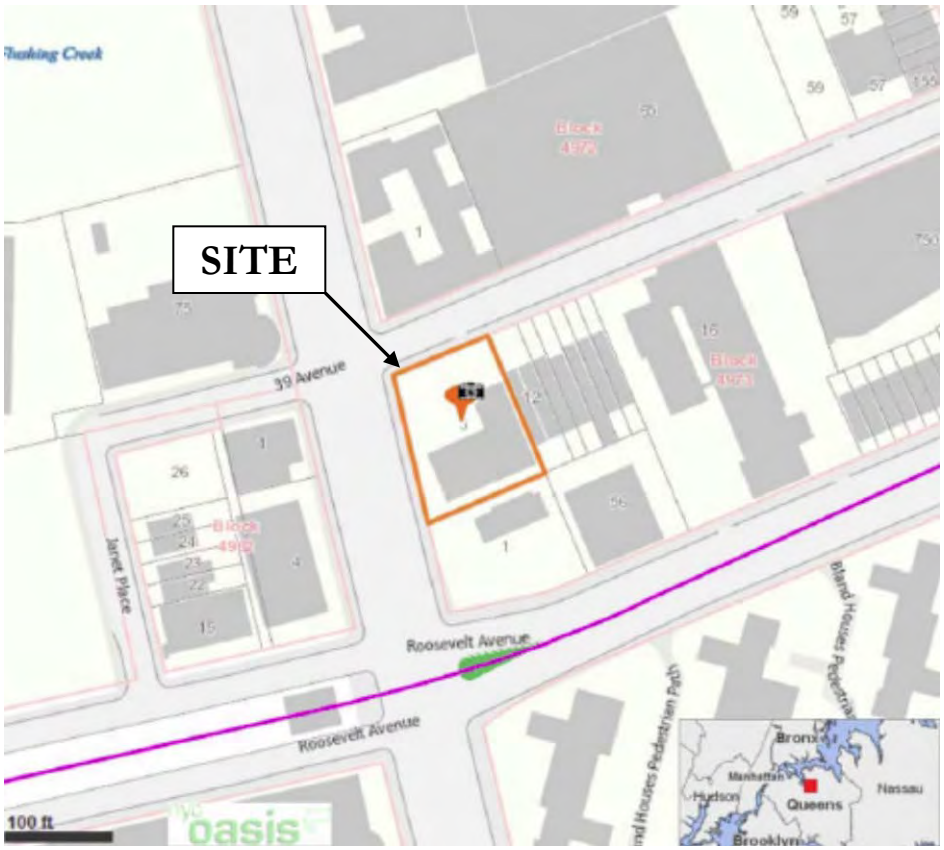
Very truly yours,

MUESER RUTLEDGE CONSULTING ENGINEERS

By: Walter E. Kaeck
Walter E. Kaeck

SOHJ:WEK F:\126\12629 - AAFE\Geotechnical Investigation\FinalPhase\FinalAdditionalFindingsReportText.docx

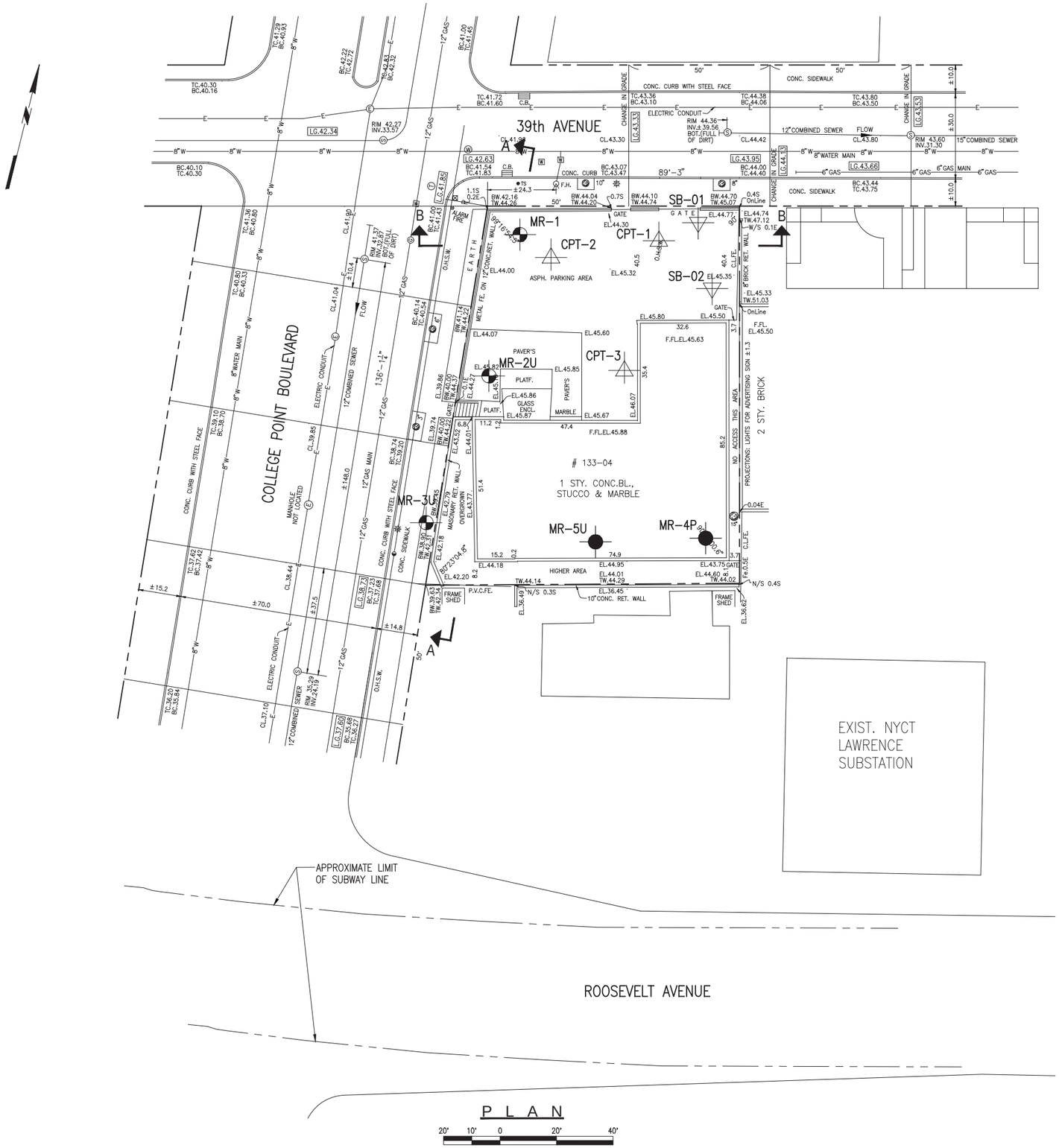
EXHIBITS



N

NOTE: Map from the Open Accessible Space Information System (OASIS) website, www.oasisnyc.net, retrieved on 6/30/2016

AAFE Mixed-Use Building, Queens, New York	
Mueser Rutledge Consulting Engineers **225 West 34th Street • New York, NY 10122**	06/30/16
Site Location Plan	MRCE 12629



NOTES:

1. THE BASE PLAN FOR THE PROJECT SITE IS FROM THE ARCHITECTURAL SITE SURVEY, DRAWING REFERENCE NO. Q4973-002, PREPARED BY JOSEPH NICOLETTI ASSOCIATES, 499 JERICHO TURNPIKE, SUITE 201, MINEOLA, NEW YORK, 11501, DATED MARCH 1, 2016.
2. THE OUTLINES OF ADJACENT BUILDINGS WERE TAKEN FROM THE NEW YORK CITY DEPARTMENT OF CITY PLANNING ZONING MAP.
3. THE LOCATION OF THE NYCT SUBWAY TUNNEL UNDER ROOSEVELT AVE WAS TAKEN FROM NYCT DRAWING ROUTE NO. 52 – SECTION NO.3, STA. 0 + 00 TO STA. 8 + 30, STRUCTURAL PLAN DWG NO. 28, DATED 4-02-1923.
4. THE LOCATION OF THE NYCT SUBWAY SUBSTATION WAS TAKEN FROM NYCT DRAWING ROUTE NO. 52 – SECTION NO. 3, LAWRENCE SUBSTATION STRUCTURAL PLANS, FIRST FLOOR PLAN. DWG NO. 306, DATED 9-19-1951.
5. THE NYCT STRUCTURES WERE LOCATED BY SCANNING THE REFERENCED DRAWINGS AND SCALING THEM TO FIT ON THE BASE PLAN. ALL LOCATIONS ARE APPROXIMATE.
6. BORINGS MR-1, MR-2U, MR-3U AND CPTS WERE MADE BY CRAIG DRILLING, INC., OF MAYS LANDING, NEW JERSEY, BETWEEN MAY 2, THROUGH MAY 10, 2016, UNDER THE CONTINUOUS INSPECTION OF MUESER RUTLEDGE CONSULTING ENGINEERS (MRCE).
7. BORINGS MR-4P & MR-5U WERE MADE BY CRAIG DRILLING OF MAYS LANDING, NY, ON DECEMBER 15, 2016, UNDER THE CONTINUOUS INSPECTION OF MUESER RUTLEDGE CONSULTING ENGINEERS.
8. BORINGS TWP-01/SB-01 AND TWP-02/SB-02 WERE MADE BY AQUIFER DRILLING AND TESTING, BETWEEN NOVEMBER 4 & 5, 2006, UNDER THE INSPECTION OF LOUIS BERGER AND ASSOCIATES, P.C.
9. ELEVATIONS AT THE BORING LOCATIONS WERE ESTIMATED IN REFERENCE TO NAVD88 BASED ON AVAILABLE SITE SURVEY INFORMATION.
10. BORING LOCATIONS WERE MEASURED IN THE FIELD OFF OF EXISTING STRUCTURAL FEATURES.
11. GEOLOGIC SECTION A-A IS SHOWN ON DRAWING GS-1 AND GEOLOGIC SECTION B-B IS SHOWN ON DWG. GS-2.

LEGEND:

- MR-3U – PRELIMINARY PHASE BORING – "U" UNDISTURBED SAMPLE
- MR-4P – FINAL PHASE BORING – "P" PIEZOMETER
- CPT-1 – CPT BY CRAIG TEST
- SB-01 – EXISTING BORING MADE BY AQUIFER DRILLING AND TESTING

REV.	DATE	BY	DESCRIPTION
1	01-12-17	S.O.H.J.	FINAL PHASE

AAFE MIXED USE BUILDING

QUEENS NEW YORK

ASIAN AMERICANS FOR EQUALITY

NEW YORK NEW YORK

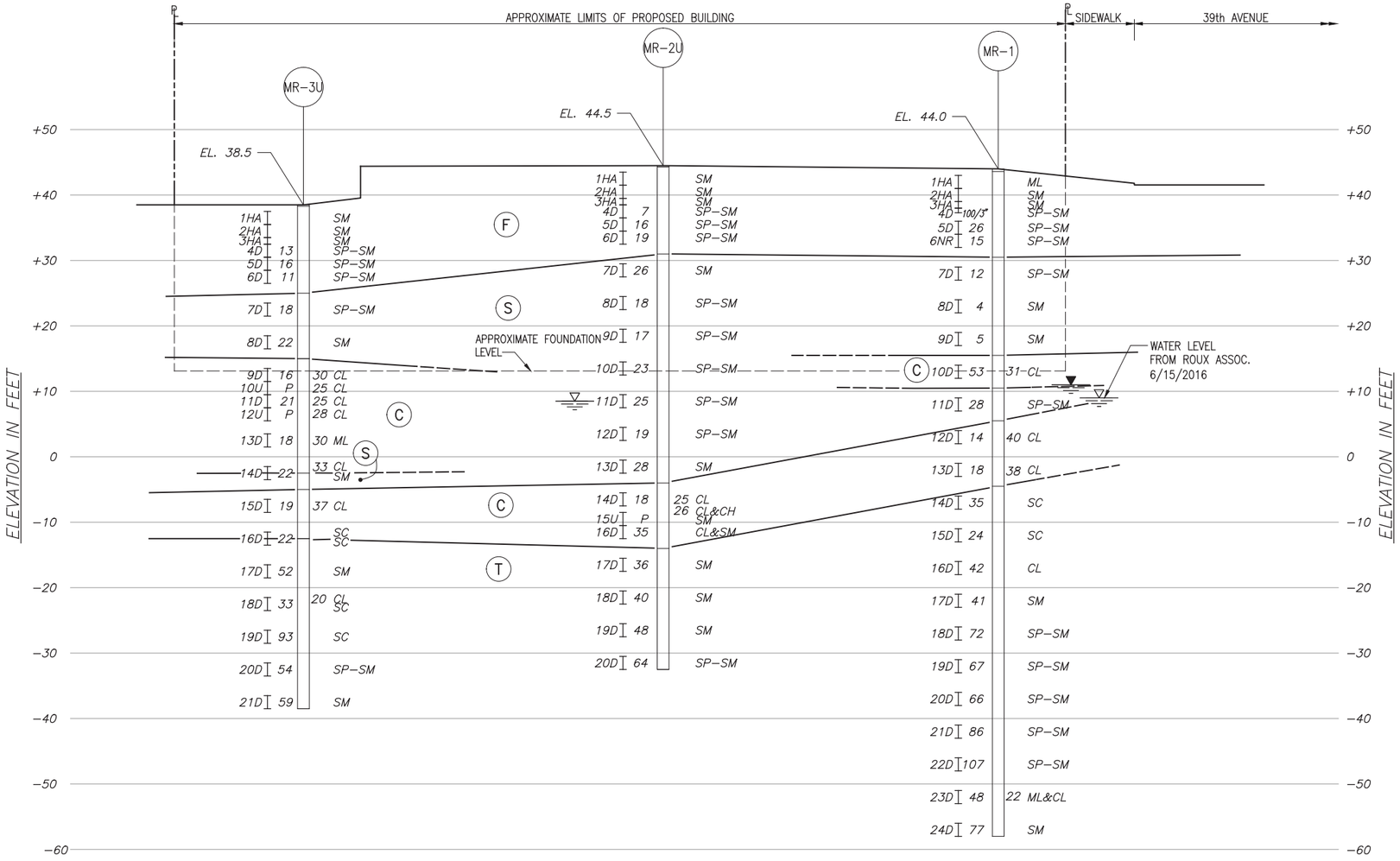
MUESER RUTLEDGE CONSULTING ENGINEERS

14 PENN PLAZA – 225 W. 34TH STREET, NY, NY 10122

SCALE	MADE BY: E.C. DATE: 06-07-2016	FILE NUMBER
GRAPHIC	CH'KD BY: S.O.H.J. DATE: 06-07-2016	12629

BORING LOCATION PLAN — DRAWING NUMBER B-1

Printed by: Kendall John
Printed on: Friday, Jan 13, 2017 - 08:03:14 AM
Last saved by: tvargaslondono on Thursday, Jan 12, 2017 - 2:42:19 PM
G:\DWGS\126\12629\B-1.dwg



GEOLOGIC SECTION A-A

GENERAL STRATA DESCRIPTIONS:

(F) **FILL** – LOOSE TO MEDIUM COMPACT, BROWN FINE TO COARSE SAND, SOME TO TRACE SILT, TRACE TO SOME GRAVEL.

(S) **SAND** – LOOSE TO MEDIUM COMPACT, BROWN FINE TO COARSE SAND, TRACE TO SOME SILT, TRACE GRAVEL.

(C) **SILTY CLAY** – STIFF TO HARD BROWN, RED–BROWN AND GRAY SILTY CLAY, SOMETIMES INTERLAYERED OR VARVED WITH CLAYEY SILT, SILT OR FINE TO MEDIUM SAND SEAMS.

(T) **TILL** – MEDIUM COMPACT TO VERY COMPACT, BROWN TO GRAY FINE TO COARSE SAND, TRACE TO SOME SILT WITH LAYERS AND POCKETS OF CLAYEY SAND, TRACE GRAVEL, LIGNITE.

GEOLOGIC SECTION NOTES:

1. FOR GENERAL NOTES AND LOCATIONS OF BORINGS AND GEOLOGIC SECTIONS, SEE BORING LOCATION PLAN, DRAWING NO. B–1.
2. FOR BORING LEGEND AND SOIL CLASSIFICATION SYSTEM, SEE GEOTECHNICAL REFERENCE STANDARDS, DRAWING NO. GS–R.
3. BORINGS ILLUSTRATED ON GEOLOGIC SECTIONS ARE IN SOME CASES PROJECTED TO THE SECTION OR OFFSET FOR CLARITY. STRATIFICATIONS SHOWN ON GEOLOGIC SECTIONS ARE NECESSARY INTERPOLATIONS BETWEEN AND BEYOND BORINGS AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
4. WATER LEVELS SHOWN ARE PRELIMINARY WATER LEVELS PROVIDED BY ROUX ASSOCIATES, INC. FROM THEIR ENVIRONMENTAL INVESTIGATION, JUNE, 2016.

GRAPHIC SCALE
10' 5' 0 10' 20'

REV.	DATE	BY	DESCRIPTION
1	01–12–17	S.O.H.J.	FINAL PHASE

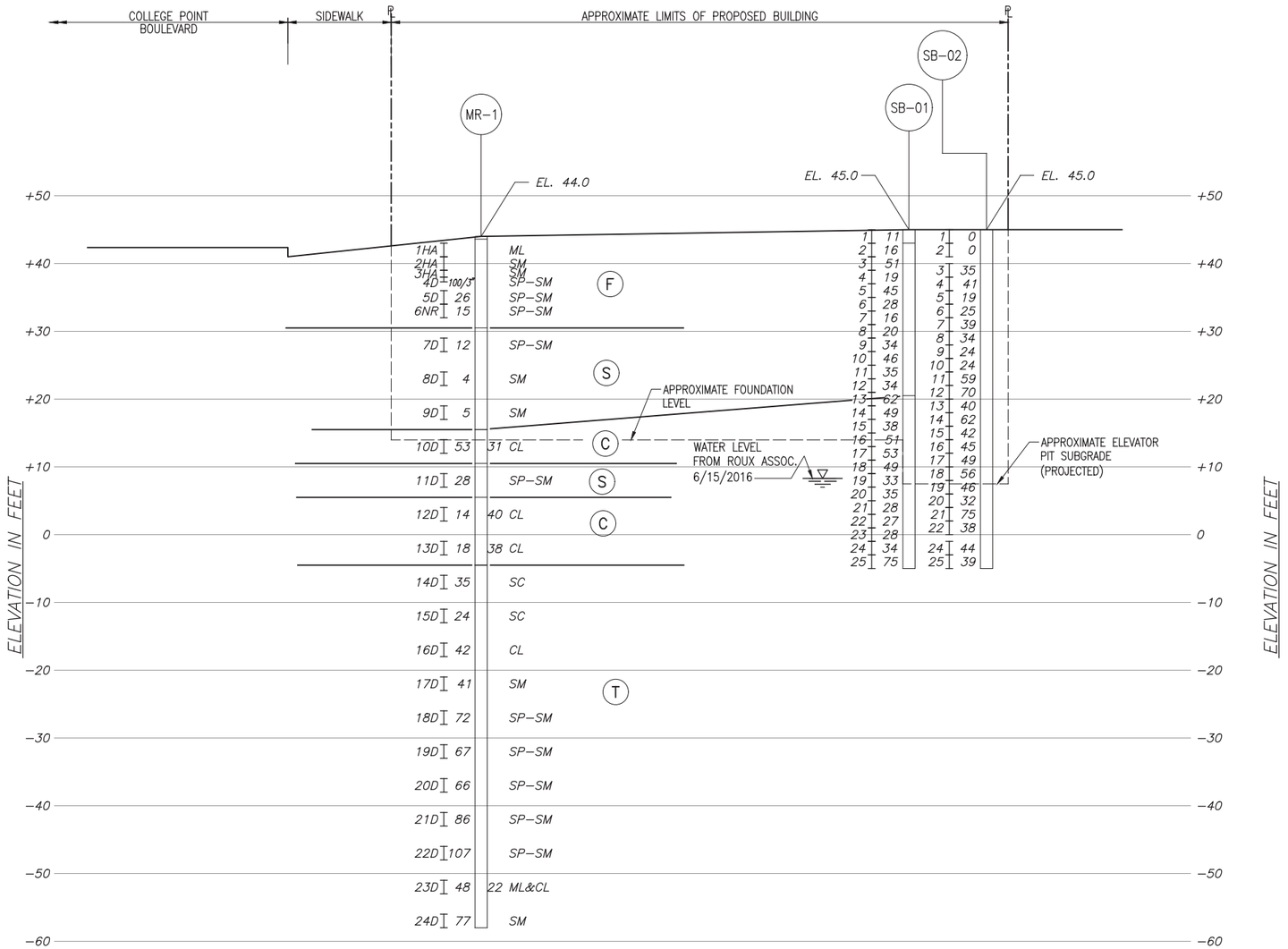
AAFE MIXED USE BUILDING
QUEENS NEW YORK

ASIAN AMERICANS FOR EQUALITY
NEW YORK NEW YORK

MUESER RUTLEDGE CONSULTING ENGINEERS
14 PENN PLAZA – 225 W. 34TH STREET, NY, NY 10122

SCALE	MADE BY: E.C. DATE: 06–07–2016	FILE NUMBER
GRAPHIC	CH'KD BY: S.O.H.J. DATE: 06–07–2016	12629

GEOLOGIC SECTION A–A — DRAWING NUMBER GS–1



GEOLOGIC SECTION B-B

GENERAL STRATA DESCRIPTIONS:

(F) **FILL** – LOOSE TO MEDIUM COMPACT, BROWN FINE TO COARSE SAND, SOME TO TRACE SILT, TRACE TO SOME GRAVEL.

(S) **SAND** – LOOSE TO MEDIUM COMPACT, BROWN FINE TO COARSE SAND, TRACE TO SOME SILT, TRACE GRAVEL.

(C) **SILTY CLAY** – STIFF TO HARD BROWN, RED–BROWN AND GRAY SILTY CLAY, SOMETIMES INTERLAYERED OR VARVED WITH CLAYEY SILT, SILT OR FINE TO MEDIUM SAND SEAMS.

(T) **TILL** – MEDIUM COMPACT TO VERY COMPACT, BROWN TO GRAY FINE TO COARSE SAND, TRACE TO SOME SILT WITH LAYERS AND POCKETS OF CLAYEY SAND, TRACE GRAVEL, LIGNITE.

NOTES:

FOR NOTES, SEE DRAWING NO. GS–1.

GRAPHIC SCALE

10' 5' 0 10' 20'

REV.	DATE	BY	DESCRIPTION
1	01–12–17	S.O.H.J.	FINAL PHASE

AAFE MIXED USE BUILDING

QUEENS NEW YORK

ASIAN AMERICANS FOR EQUALITY

NEW YORK NEW YORK

MUESER RUTLEDGE CONSULTING ENGINEERS

14 PENN PLAZA – 225 W. 34TH STREET, NY, NY 10122

SCALE	MADE BY: E.C. DATE: 06–07–2016	FILE NUMBER
GRAPHIC	CH'KD BY: S.O.H.J. DATE: 06–07–2016	12629

GEOLOGIC SECTION B–B

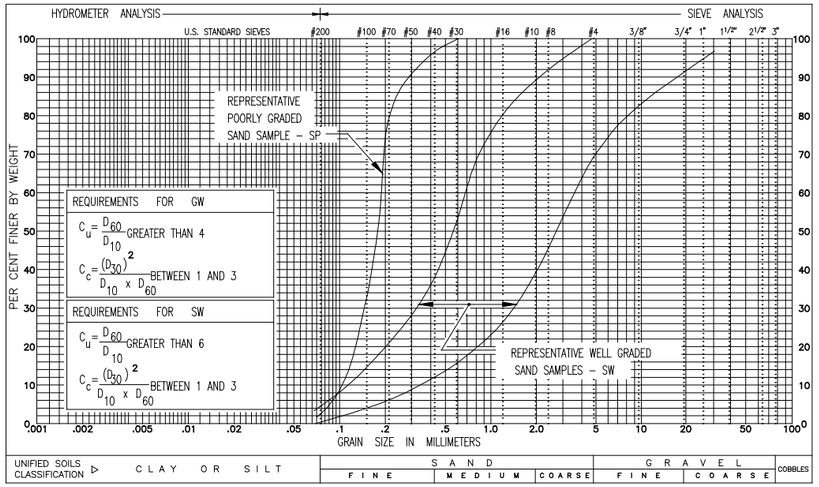
DRAWING NUMBER GS–2

UNIFIED SOIL CLASSIFICATION (INCLUDING IDENTIFICATION AND DESCRIPTION)

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	FIELD IDENTIFICATION PROCEDURES (EXCLUDING PARTICLES LARGER THAN 3 IN. AND BASING FRACTIONS ON ESTIMATED WEIGHTS)
1	2		3	4	5
COARSE-GRAINED SOILS: MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS: MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE. (FOR VISUAL CLASSIFICATION, THE 1/4 -IN. SIZE MAY BE USED AS EQUIVALENT TO THE NO. 4 SIEVE SIZE)	CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	WIDE RANGE IN GRAIN SIZES AND SUBSTANTIAL AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES.
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY (FOR IDENTIFICATION PROCEDURES SEE ML BELOW)
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES.	PLASTIC FINES (FOR IDENTIFICATION PROCEDURES SEE CL BELOW)
	SANDS: MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE. (FOR VISUAL CLASSIFICATION, THE 1/4 -IN. SIZE MAY BE USED AS EQUIVALENT TO THE NO. 4 SIEVE SIZE)	CLEAN SANDS (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	WIDE RANGE IN GRAIN SIZES AND SUBSTANTIAL AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES.
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SM	SILTY SANDS, SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY (FOR IDENTIFICATION PROCEDURES SEE ML BELOW)
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES.	PLASTIC FINES (FOR IDENTIFICATION PROCEDURES SEE CL BELOW)
FINE-GRAINED SOILS: MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE. THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE					IDENTIFICATION PROCEDURES ON FRACTION SMALLER THAN NO. 40 SIEVE SIZE
					DRY STRENGTH (CRUSHING CHARACTERISTICS) / DILATANCY (REACTION TO SHAKING) / TOUGHNESS (CONSISTENCY NEAR PL)
	SILTS AND CLAYS: LIQUID LIMIT IS LESS THAN 50		ML	INORGANIC SILTS, SANDY SILTS, ROCK FLOUR, OR CLAYEY SILTS WITH SLIGHT PLASTICITY.	NONE TO SLIGHT / QUICK TO SLOW / NONE
			CL	INORGANIC CLAYS, OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.	MEDIUM TO HIGH / NONE TO VERY SLOW / MEDIUM
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.	SLIGHT TO MEDIUM / SLOW / SLIGHT
	SILTS AND CLAYS: LIQUID LIMIT IS GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.	SLIGHT TO MEDIUM / SLOW TO NONE / SLIGHT TO MEDIUM
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.	HIGH TO VERY HIGH / NONE / HIGH
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.	MEDIUM TO HIGH / NONE TO VERY SLOW / SLIGHT TO MEDIUM
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS.	READILY IDENTIFIED BY COLOR, ODOR, SPONGY FEEL AND FREQUENTLY BY FIBROUS TEXTURE.

BOUNDARY CLASSIFICATIONS: SOILS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE DESIGNATED BY COMBINATIONS OF GROUP SYMBOLS, I.E.: SP-SC POORLY GRADED SAND WITH CLAY BINDER.

LABORATORY CLASSIFICATION CRITERIA

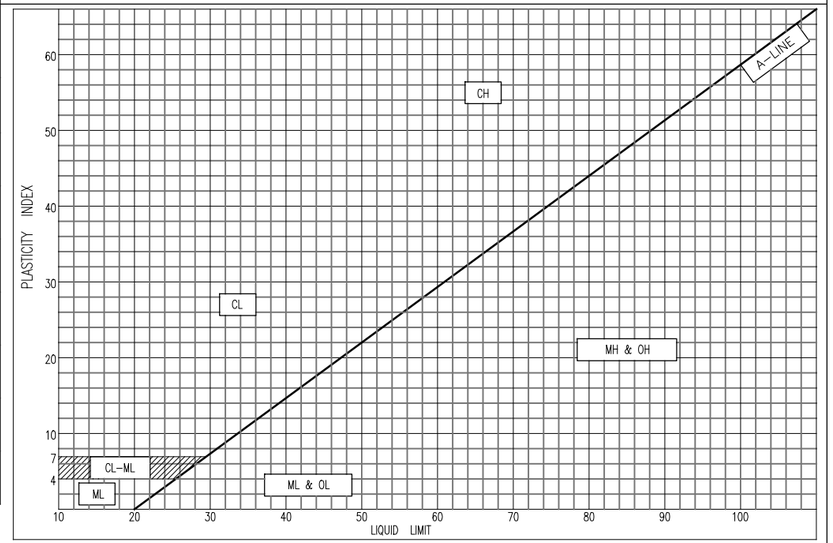


GRAIN SIZE PLOT

COBBLE 3-12"
BOULDER > 12"

DEPENDING ON PERCENTAGE OF FINES (FRACTION SMALLER THAN NO. 200 SIEVE SIZE) COARSE GRAINED SOILS ARE CLASSIFIED AS FOLLOWS:

LESS THAN 5%	GW, GP, SW, SP
MORE THAN 12%	GM, GC, SM, SC
5% TO 12%	BORDERLINE CASES REQUIRING USE OF DUAL SYMBOLS, I.E.: SP-SM, GP-GM.



PLASTICITY CHART FOR CLASSIFICATION OF FINE GRAINED SOILS

TERMINOLOGY USED IN MRCE SOIL DESCRIPTIONS

DEGREE OF COMPACTION FOR NON-PLASTIC SOIL

DEGREE OF COMPACTION	BLOWS* PER FOOT
LOOSE	0 TO 10
MEDIUM COMPACT	11 TO 29
COMPACT	30 TO 50
VERY COMPACT	GREATER THAN 50

* STANDARD PENETRATION RESISTANCE USING 140 LB. HAMMER FREE FALLING 30 INCHES TO DRIVE A 2 INCH O.D. SPLIT-SPOON SAMPLER.

CONSISTENCY OF CLAY AND CLAYEY SILT+

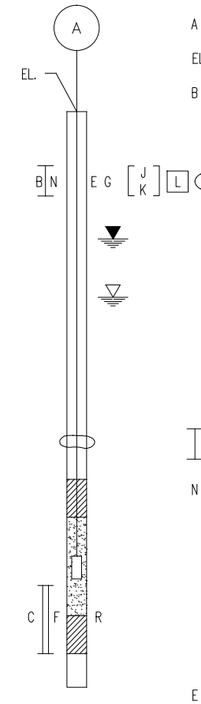
CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH (TSF)	IDENTIFICATION CHARACTERISTICS
SOFT	LESS THAN 0.5	EASILY REMOLDED WITH SLIGHT FINGER PRESSURE
MEDIUM	0.5 TO 1.0	REQUIRES SUBSTANTIAL PRESSURE FOR REMOLDING
STIFF	1.0 TO 4.0	DIFFICULT TO REMOLD WITH FINGERS
HARD	GREATER THAN 4.0	CANNOT BE REMOLDED WITH FINGERS

\+ NONPLASTIC SILTS ARE DESCRIBED USING DEGREE OF COMPACTION AS PRESENTED FOR NON-PLASTIC SOIL.

DESCRIPTION OF CONSTITUENT PERCENTAGES AS USED IN SOIL SAMPLE CLASSIFICATIONS

- 1% TO 12% - "TRACE"
- 13% TO 30% - "SOME"
- 31% TO 49% - ADJECTIVE FORM OF SOIL GROUP (EG. SANDY)
- EQUAL AMOUNT - "AND" (EG. SAND AND GRAVEL)

BORING LEGEND



- A — NUMBER, TYPE AND LOCATION OF BORING
- EL. — GROUND SURFACE ELEVATION AT BORING
- B — NUMBER AND TYPE OF SAMPLE
  - HA - HAND AUGER SAMPLE
  - D - DRY SAMPLE TAKEN WITH 2 INCH O.D. SPLIT SPOON
  - U - UNDISTURBED SAMPLE TAKEN WITH 3 INCH O.D. FIXED PISTON TYPE SAMPLER
  - UD - UNDISTURBED SAMPLE EXTRUDED IN FIELD AND PLACED IN JAR DUE TO POOR RECOVERY OR DISTURBANCE
  - S - THIN TUBE SAMPLE TAKEN WITH SHELBY TUBE SAMPLER
  - N - THIN TUBE SAMPLE TAKEN WITH DENISON BARREL SAMPLER
  - P - THIN TUBE SAMPLE TAKEN WITH PITCHER BARREL SAMPLER
  - NR - NO RECOVERY
- | — LENGTH OF SAMPLE ATTEMPT
- N — STANDARD PENETRATION RESISTANCE. NUMBER OF BLOWS FROM 140 LB. HAMMER FREE FALLING 30 INCHES REQUIRED TO DRIVE 2 INCH O.D. SPLIT SPOON SAMPLER ONE FOOT AFTER INITIAL PENETRATION OF 6 INCHES, UNLESS A SPECIFIC PENETRATION IS INDICATED.
  - P - PRESSED OR PUSH SAMPLE
  - WH - SAMPLE TAKEN UNDER WEIGHT OF HAMMER AND RODS
  - WR - SAMPLE TAKEN UNDER WEIGHT OF RODS
- E — AVERAGE NATURAL WATER CONTENT OF SAMPLE, IN PERCENT OF DRY WEIGHT
- G — UNIFIED SOIL CLASSIFICATON GROUP SYMBOL OF SAMPLE
- [J / K] = ATTERBERG LIQUID LIMIT VALUE / ATTERBERG PLASTIC LIMIT VALUE
- [L] — COMPRESSIVE STRENGTH IN TSF DETERMINED FROM UNCONFINED COMPRESSION TEST
- (M) — COMPRESSIVE STRENGTH IN TSF DETERMINED FROM UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST
- ▼ — GROUNDWATER LEVEL OBSERVED IN BORING
  - * - MUD LEVEL
- ▽ — GROUNDWATER LEVEL OBSERVED IN PIEZOMETER
- C — ROCK CORE NUMBER
- | — LENGTH OF CORE RUN
- F — LENGTH OF CORE RECOVERED EXPRESSED AS A PERCENT OF THE LENGTH OF CORE RUN
- R — ROCK QUALITY DESIGNATION-THE SUM OF THE LENGTHS OF PIECES OF RECOVERED CORE WHICH ARE EQUAL TO OR GREATER THAN FOUR INCHES IN LENGTH, EXPRESSED AS A PERCENTAGE OF THE TOTAL LENGTH OF CORE RUN. LENGTHS ARE MEASURED BETWEEN IN-SITU SEPARATIONS AND MECHANICAL BREAKS RESULTING FROM CORING ARE IGNORED.
- IMPERVIOUS SEAL
- SAND FILTER SURROUNDING PIEZOMETER INTAKE ELEMENT
- INTAKE ELEMENT
- COBBLE OR BOULDER

REVISED 10-25-2012

MUESER RUTLEDGE CONSULTING ENGINEERS
225 WEST 34th STREET - 14 PENN PLAZA
NEW YORK, NY 10122

GEOTECHNICAL REFERENCE STANDARDS

DRAWING NO. GS-R

APPENDIX A

MRCE Final Boring Drawings

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

BORING NO. MR-4P
SHEET 1 OF 4
PROJECT: AAFE MIXED USE BUILDING **FILE NO.** 12629
LOCATION: FLUSHING, QUEENS **SURFACE ELEV.** 44.5±
RES. ENGR. ERIC POON

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
07:00	1D	0.0	7-6	Brown silty fine to medium sand, trace coarse			DRILLED	
12-15-16		2.0	7-9	sand, gravel (Fill) (SM)			AHEAD	
Thursday	2D	2.0	8-7	Do 1D, trace brick (Fill) (SM)			4"	
Overcast		4.0	8-8				↓	
23°F	3D	4.0	6-4	Brown silty fine to medium sand, trace gravel	F	**5**	↓	
		6.0	2-5	(Fill) (SM)			↓	
	4D	6.0	6-6	Brown fine to coarse sand, some silt, trace			↓	
		8.0	5-9	gravel (Fill) (SM)		**8**	↓	
	5D	8.0	15-18	Brown fine to coarse sand, some gravel, silt				REC=6"
		10.0	15-10	(Fill) (SM)		**10**		
	6D	10.0	16-16	Brown fine to coarse sand, some gravel, trace				
		12.0	12-17	silt (SP-SM)				
						15		
	7D	15.0	11-9	Brown fine to coarse sand, some gravel, trace				
		17.0	8-8	silt (SP-SM)				
						20		
	8D	20.0	10-13	Brown fine to medium sand, trace silt, coarse				
		22.0	10-12	sand, gravel (SP-SM)				
						25		
	9D	25.0	12-17	Do 8D (SP-SM)	S			
		27.0	19-18					
						28.5		
						30		
	10D	30.0	18-19	Brown fine to medium sand, some silt (SM)				
		32.0	19-15					
						35		
	11D	35.0	15-18	Brown fine to coarse sand, trace silt, gravel				
		37.0	19-15	(SP-SM)				
						40		
	12D	40.0	17-20	Gray fine sand, some silt, trace coarse sand (SM)				
		42.0	22-22					
						43.5		
						45		
	13D	45.0	16-20	Gray fine to coarse sand, trace silt, gravel				
		47.0	23-17	(SP-SM)				
					T			
						50		
	14D	50.0	20-18	Brown fine to coarse sand, some silt, gravel				
		52.0	20-17	(SP-SM)				

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

BORING NO. MR-4P
SHEET 2 OF 4
PROJECT: AAFE MIXED USE BUILDING **FILE NO.** 12629
LOCATION: FLUSHING, QUEENS **SURFACE ELEV.** 44.5±
RES. ENGR. ERIC POON

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
Cont'd								
12-15-16								
Thursday								
Overcast								
23°F						**55**		
	15D	55.0	14-19	Gray silty fine to coarse sand, trace gravel (SM)				
		57.0	56-31					
						60		Possible boulder at 60'.
	16NR	60.0	100/0"	No recovery				Rig chatter between 60'
		62.0						to 65'.
					T			
						65		
	17D	65.0	16-22	Brown fine to medium sand, some silt, trace				
		67.0	20-13	coarse sand, gravel (SM)				
						70		
	18D	70.0	25-21	Gray fine to coarse sand, some silt, trace gravel				
		72.0	22-25	(SM)				
						75		
	19D	75.0	22-24	Red to brown fine to medium sand, some silt,				
10:30		77.0	22-22	trace coarse sand (SM)		**77**		End of Boring at 77'.
						80		
						85		
						90		
						95		
						100		

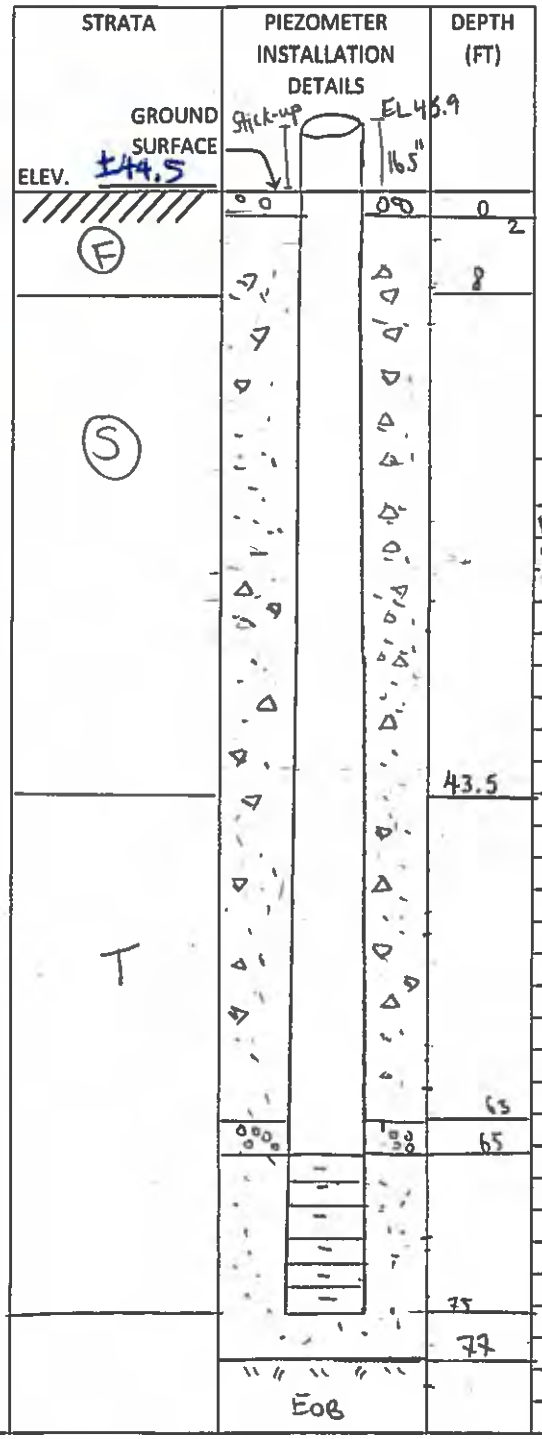
Mueser Rutledge Consulting Engineers
14 Penn Plaza - 225 West 34th Street
New York, NY 10122
T: 917 339-9300 F: 917 339-9400
www.mrce.com

PIEZOMETER RECORD

PIEZOMETER OR BORING NO. MR-4P
SHEET 3 OF 4
FILE NO. 12629
INSTALLATION DATE 12-15-2016
RES ENGR. ERIC POON

PROJECT: AAFE MIXED USE BUILDING
LOCATION: FLUSHING, QUEENS
PIEZOMETER LOCATION: SEE BLP

☐ SEE SKETCH ON BACK



PIEZOMETER TYPE PVC SLOTTED PIPE

INTAKE POINT
depth to bottom, ft = 75
depth to top, ft = 65
length, ft = 10 = L
diameter, in = 2.375" O.D. ft = 0.17 = 2R

STANDPIPE/RISER
elevation of rim, ft = ~ ± 45.9
diameter, in = 2.067" I.D. ft = 0.17 = 2r

READING TIME		DEPTH – RIM TO WATER	ELEVATION OF WATER	REMARKS
DATE	CLOCK			
12-15-2016	14:00	8.3	37.6	UPON COMPLETION
1-4-2017	16:00	47.9	-2.0	SCHEDULED READING
1-9-2017	07:30	49.7	-3.8	SCHEDULED READING

SAND
GRAVEL
BENTONITE
GROUT

GROUND SURFACE ELEV. 44.5 (±)

PIEZOMETER NO. MR-4P

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. MR-4P
SHEET 4 **OF** 4

PROJECT AAFE MIXED USE BUILDING
FILE NO. 12629
LOCATION FLUSHING, QUEENS
SURFACE ELEV. 44.5±
BORING LOCATION SEE BORING LOCATION PLAN
DATUM NAVD 88

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED		X YES		NO		
TRUCK	CME-75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO	8	
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO		
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO		
OTHER										

TYPE AND SIZE OF:

D-SAMPLER	2" O. D. SPLIT SPOON
U-SAMPLER	
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	NWJ

DRILLING MUD USED X YES NO
DIAMETER OF ROTARY BIT, IN. 3-7/8
TYPE OF DRILLING MUD BIO-BORE

AUGER USED YES X NO
TYPE AND DIAMETER, IN.

*CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
*USED AUTOMATIC HAMMER.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
					SEE PIEZOMETER RECORD SHEET.

PIEZOMETER INSTALLED X YES NO SKETCH SHOWN ON SEE SHEET NO. 3

STANDPIPE:	TYPE	PVC	ID, IN.	1-3/4	LENGTH, FT.	65	TOP ELEV.	45.9
INTAKE ELEMENT:	TYPE	SLOTTED PVC	OD, IN.	2	LENGTH, FT.	10	TIP ELEV.	-29.1
FILTER:	MATERIAL	SAND	OD, IN.	4	LENGTH, FT.	12	BOT. ELEV.	-32.5

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	77	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR CRAIG GEOTECHNICAL DRILLING
DRILLER JOHN MILLINGTON HELPERS JIMMY MARTINEZ
REMARKS PIEZOMETER INSTALLED.
RESIDENT ENGINEER ERIC POON DATE 12-15-16
CLASSIFICATION CHECK: CHERYL J. MOSS TYPING CHECK: SARAH JOHNSON

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

BORING NO. MR-5U
SHEET 1 OF 2
PROJECT: AAFE MIXED USE BUILDING **FILE NO.** 12629
LOCATION: FLUSHING, QUEENS **SURFACE ELEV.** +44 (±)
RES. ENGR. ERIC POON

DAILY PROGRESS	SAMPLE NO.	SAMPLE DEPTH	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
12:40	1D	0.0	11-6	Brown fine to coarse sand, trace silt, gravel			DRILLED	REC=1"
12-15-16		2.0	3-4	(Fill) (SM)			AHEAD	
Thursday							4"	
Sunny						**3.5**		
23°F						**5**		
	2D	5.0	WR/12"	Brown clayey silt, some fine to medium sand				WC=21
		7.0	1-2	(ML)	**F**			
						10		
	3D	10.0	6-2	Do 2D, trace coarse sand (ML)				WC=22
		12.0	2-2					
						13.5		
						15		
	4D	15.0	6-5	Brown clayey fine to coarse sand, trace gravel				
		17.0	8-13	(SC)				
					S			
						20		
	5D	20.0	6-10	Brown fine to medium sand, some silt, trace				
		22.0	9-7	coarse sand, gravel (SM)				
						23.5		
						25		
	6D	25.0	4-6	Stiff red brown silty clay, trace fine to coarse				WC=27, pp=2.0
		27.0	9-8	sand (CL)				
	7U	28.0	PUSH=24"	Stiff red brown silty clay (CL)				WC=33, pp=3.0,
		30.0	REC=19"			**30**		slickensided.
	8D	30.0	7-8	Stiff red brown silty clay, trace fine to coarse				WC=28, pp=2.0,
		32.0	11-12	sand (CL)				slickensided.
					C			
						35		
	9D	35.0	5-9	Stiff red brown silty clay (CH)				WC=25, pp=2.5,
		37.0	14-14					slickensided.
						40		
	10D	40.0	9-10	Do 9D (CH)				WC=29, pp=3.0,
14:15		42.0	19-18			**42**		slickensided.
								End of Boring at 42'.
						45		WC=Water Content
								in percent of dry
								weight.
								pp=Pocket
						50		Penetrometer
								Unconfined Compres-
								sive Strength in tsf.

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. MR-5U
SHEET 2 **OF** 2

PROJECT AAFE MIXED USE BUILDING
FILE NO. 12629
LOCATION FLUSHING, QUEENS
SURFACE ELEV. +44 (±)
BORING LOCATION SEE BORING LOCATION PLAN
DATUM NAVD 88

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG		TYPE OF FEED DURING CORING		CASING USED					
TRUCK	CME-75	MECHANICAL		DIA., IN.	4	DEPTH, FT. FROM	0	TO	10
SKID		HYDRAULIC	X	DIA., IN.		DEPTH, FT. FROM		TO	
BARGE		OTHER		DIA., IN.		DEPTH, FT. FROM		TO	
OTHER									

CASING USED: [X] YES [ ] NO

TYPE AND SIZE OF:

D-SAMPLER	2" O. D. SPLIT SPOON
U-SAMPLER	THIN WALL
S-SAMPLER	
CORE BARREL	
CORE BIT	
DRILL RODS	NWJ

DRILLING MUD USED: [X] YES [ ] NO
DIAMETER OF ROTARY BIT, IN. 3-3/4
TYPE OF DRILLING MUD BIO-BORE

AUGER USED: [ ] YES [X] NO
TYPE AND DIAMETER, IN.

*CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
*SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
*USED AUTOMATIC HAMMER.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
					NO WATER OBSERVATIONS MADE.

PIEZOMETER INSTALLED [ ] YES [X] NO SKETCH SHOWN ON

STANDPIPE:	TYPE		ID, IN.		LENGTH, FT.	TOP ELEV.	
INTAKE ELEMENT:	TYPE		OD, IN.		LENGTH, FT.	TIP ELEV.	
FILTER:	MATERIAL		OD, IN.		LENGTH, FT.	BOT. ELEV.	

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	42	NO. OF 3" SHELBY TUBE SAMPLES	1
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER:	

BORING CONTRACTOR CRAIG GEOTECHNICAL DRILLING
DRILLER JOHN MILLINGTON HELPERS JIMMY MARTINEZ
REMARKS BOREHOLE BACKFILLED WITH CUTTINGS UPON COMPLETION.
RESIDENT ENGINEER ERIC POON DATE 12-15-16
CLASSIFICATION CHECK: CHERYL J. MOSS TYPING CHECK: SARAH JOHNSON

APPENDIX B

Adjacent Building Information

NO ELEVATION FOR SITE DATUM

GENERAL NOTES

1. CONTRACT[illegible] ALL FAMILIARIZE HIMSELF WITH "AIA DOCUMENT A107 GENERAL CONDITIONS" WHICH IS PART OF SPECIFICATIONS.
2. CONTRA[illegible] SHALL VISIT THE SITE AND BE FAMILIAR OF EXISTING CONDITIONS.
3. CONSTRUCTION SHALL COMPLY WITH ALL FEDERAL, STATE, CITY AND CODES, ORDINANCES, RULES AND REGULATIONS PERTAINING TO LABOR, EQUIPMENT AND MATERIALS
4. WRITTEN DIMENSIONS SHALL T[illegible] PRECEDENCE OVER SCALED DIMENSIONS AND DETAILED DRAWINGS OVER SMALLER SCALE DRAWINGS.
5. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS O[illegible] THE JOB AND THE ARCHITECTS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS OF THE DIMENSION AND CONDITION SHOWN ON THESE DRAWINGS.
6. CONTRACTOR SHALL PR[illegible]E THE REQUIRED LIABILITY INSURANCE, WORKMEN'S COMPENSATION INSURANCE AND DISABILITY INSURANCE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMIT FROM BUILDING DEPARTMENT AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR NECESSARY PROTECTION FOR ALL WORK TO CONFORM TO NYC BUILDING CODE INCLUDING SIDEWALK SHED, FENCE, BARRIER, WARNING SIGN, ETC., WHERE REQUIRED.
9. THE ARCHITECT OR ENGINEER OF DESIGN HAS NOT BEEN RETAINED FOR ANY FIELD SUPERVISION OR INSPECTION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS, MIS-ALIGNMENT, ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD PRACTICE.
11. ALL INTERIOR FINISHES SHALL HAVE FLAME SPREAD RATING OF CLASS "B", EXIT AND PASSAGE LEAD TO THE EXIT SHALL HAVE FLAME SPREAD RATING OF CLASS "A".
12. NO WORK SHALL BE COMMENCED WITHOUT PERMIT.
13. CONTRACTOR SHALL DISCONNECT, CAP AND REROUTE ANY EXISTING WATER, SANITARY OR UTILITY LINES IN AREA OF NEW FOUNDATION AND SHALL USE LAND EXCAVATION IN AREAS OF SUSPECTED UNDERGROUND UTILITIES AND SERVICES.
14. AN ACCURATE AND COMPLETE LOT SURVEY MADE BY A LICENSED SURVEYOR SHALL BE SUBMITTED AFTER COMPLETION OF WORK SHOWING THE LOT, STRUCTURE AND FINISHED GRADES.
15. ALL HOLES THROUGH FLOORS SHALL BE PATCHED AIRTIGHT WITH APPROVED NONCOMBUSTIBLE MATERIAL. MASON CONTRACTOR SHALL PROVIDE ALL CHASES AND POCKETS REQUIRED BY OTHER TRADES.
16. ALL PLUMBING AND ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED PLUMBER AND LICENSED ELECTRICIAN RESPECTIVELY.
17. ALL FIRE RATED PARTITIONS SHALL BE CARRIED THROUGH EXISTING CEILING TO THE UNDERSIDE OF THE EXISTING STRUCTURL ABOVE, WHICH INCLUDES THE METAL STUDS AND GYPSUM WALLBOARDS ON BOTH SIDES.
18. FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF SUB-ARTICLE 1005.0 OF THE NEW YORK CITY BUILDING CODE. AN AFFIDAVIT WILL BE REQUIRED FROM THE PRODUCER OF THE STEEL CERTIFYING THAT ALL STEEL MEETS THE REQUIREMENTS AS DEFINED IN SECTIONS C26-1005.0 TO C26-1005.3 INCLUSIVE, OF THE NEW YORK CITY BUILDING CODE.
19. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM-A36.
20. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.
21. CONTRACTOR SHALL PROVIDE THE CERTIFICATE FOR ALL THE MEMBERS DELIVERED TO THE SITE.
22. ALL STEEL MEMBERS SHALL HAVE MINIMUM ONE SHOP COAT OF RUST-RESISTANT PRIMER AND FIELD TOUCH-UP. FINISH COAT OF PAINT FOR ALL EXPOSED MEMBERS.
23. LIST OF CONTROLLED INSPECTION: (A) FIRE STOPPING (B) VENTILATION (C) BUILDING STABILITY.

INSPECTION REQUIREMENTS

1. THE FOLLOWING ITEMS OF WORK SHALL BE SUBJECT TO CONTROLLED INSPECTION, MADE AND WITNESSED BY OR UNDER THE DIRECT SUPERVISION OF AN ARCHITECT OR ENGINEER RETAINED BY THE OWNER WHO SHALL BE, OR SHALL BE ACCEPTABLE TO THIS ARCHITECT. TEST REPORTS AND CERTIFICATE OF INSPECTION SHALL BE FILED WITH THE BUILDING DEPARTMENT.
   - A) INSPECTION OF SUBGRADE PRIOR TO CONSTRUCTION (C26-112.5).
   - B) UNDERPINNING OPERATION AND BRACED EXCAVATED SURFACE SHORING, EXTENDING MORE THAN 10FEET BELOW LEGALLY ESTABLISHED GRADE, AND IN ACCORDANCE WITH DRAWINGS SUBMITTED TO AND APPROVED BY THIS OFFICE (C26-112.6).
   - C) FIRESTOPPING OF:
     1. HOLLOW PARTITIONS AND FURRED SPACES.
     2. CONCEALED SPACES WITHIN STAIR CONSTRUCTION.
     3. CEILING SPACES.
     4. EXTERIOR CORNICES.
     5. DUCT AND PIPE CHASES.
   - D) CONCRETE MATERIALS FOR STRUCTURAL ELEMENTS PROPORTIONED ON THE BASIS OF CALCULATED STRESSES 70% OR GREATER OF BASIC ALLOWABLE VALUES. (C-26-1004.0).
   - E) PLACING OF CONCRETE (TABLE 10-1).
2. ALL MATERIALS, ASSEMBLIES AND METHODS OF CONSTRUCTION REGULATED BY THE CODE AND NOT LISTED ABOVE SHALL BE SUBJECT TO SEMI-CONTROLLED INSPECTION BY THE PERSON SUPERINTENDING THE CONSTRUCTION. SIGNED COPIES OF ALL TEST AND INSPECTION REPORTS SHALL FILED THROUGH THE ARCHITECT, WITH THE DEPARTMENT.
3. BORING OPERATIONS SHALL BE TO CONTROLLED INSPECTIONS TO DETERMINE THE CLASSIFICATION OF THE SOIL. (C26-1112.2).
4. INSPECTION OF SUBGRADE FOR FOOTINGS, FOUNDATIONS PILES AND FOUNDATION WALL SHALL BE INSPECTED BY AN ARCHITECT OR ENGINEER AFTER EXCAVATION AND IMMEDIATELY PRIOR TO CONSTRUCTION OF FOOTINGS. NOTIFICATION SHALL BE GIVEN TO DEPARTMENT OF BUILDINGS AT LEAST TWO DAYS PRIOR TO CONSTRUCTION. (C26-1112.5).
5. NO FOUNDATION OR EARTHWORK PERMIT SHALL BE ISSUED UNLESS AND UNTIL AT LEAST FIVE DAYS PRIOR WRITTEN NOTICE OF THE PERMIT APPLICATION SHALL HAVE BEEN GIVEN BY THE APPLICANT TO OWNERS OF ALL ADJOINING LOTS, BUILDINGS AND SERVICE FACILITIES WHICH MAY BE AFFECTED BY THE PROPOSED FOUNDATION WORK OR EARTHWORK OPERATIONS. (C26-112.3)
6. SIDES OF EXCAVATIONS TO BE PROTECTED INCLUDING RELATED OR RESULTING [illegible] OR GREATER IN DEPTH (C26-1901.2)

GENERAL NOTES MASONRY BUILDING NEW CODE

1. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, NOTES, AND CONDITIONS AT THE SITE BEFORE ANY CONSTRUCTION WORK IS STARTED.
2. AT LEAST 24 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE COMMISSIONER PRIOR TO THE COMMENCEMENT OF ANY WORK AS PER REQUIRED BY SEC. C26-110.5
3. FIVE DAYS PRIOR TO WRITTEN NOTICE OF PERMIT APPLICATION SHALL BE GIVEN TO THE OWNERS OF ALL ADJOINING LOTS, BUILDINGS AND SERVICE FACILITIES WHICH MAY BE AFFECTED BY THE FOUNDATION WORK OR EARTH WORK OPERATIONS AS PER SEC. C 26-112.3
4. THE SOIL AT THE LEVEL OF FOUNDATION OR FOOTING IS DESIGNED TO CARRY 2 TONS PER SQUARE FOOT SUBJECT TO VERIFICATION BY INSPECTION OF THE SITE AFTER EXCAVATION AND BEFORE FOOTINGS ARE PLACED.
5. THE DEPARTMENT SHALL BE NOTIFIED AT LEAST 2 WORKING DAYS PRIOR TO FOUNDATION CONSTRUCTION THAT SUBGRADE IS READY FOR INSPECTION AS PER SEC. C26-1112.5
6. WHEN EXCAVATIONS ARE 5'-0" OR GREATER IN DEPTH FROM THE LEVEL OF ADJACENT GROUND, THE SIDES SHALL BE SHORED AS PER SEC. C26-1903.02(c)
7. PROVIDE GUARD RAILS OR FENCE AT EXCAVATIONS AS PER SEC. C26-1903.2
8. EXCAVATIONS SHALL BE SUBSTANTIALLY KEPT FREE OF WATER DURING FOUNDATION CONSTRUCTION AS PER SEC. 1105.5
9. PLAIN CONCRETE NOTES:
   - A. PLAIN CONCRETE FOR FOOTINGS AND WALLS SHALL BE PROPORTIONED ON THE BASIS OF CALCULATED STRESSES LESS THAN 70% OF BASIC ALLOWABLE VALUES. LESS THAN 50 CUBIC YARDS OF CONCRETE TO BE POURED; TABLE 10-1, INSPECTION OF MATERIALS AND ASSEMBLIES; TABLE 10-2, INSPECTION OF METHODS OF CONSTRUCTIONS, BUILDING CODE: TABLE 1002(a)- ALLOWABLE STRESSES IN CONCRETE, ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AS PER ACI 318-71. STRESSES IN CONCRETE ARE COMPUTED ON THE BASIS OF WORKING STRESS DESIGN.
   - B. CONCRETE, MATERIALS, DESIGN AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF REFERENCE STANDARD RS 10-3, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-71)", AS MODIFIED BY NEW BUILDING CODE.
   - C. CONCRETE IS TO BE PROVIDED ON THE BASIS OF A PREQUALIFIED OF PREVIOUSLY ACCEPTED MIX. THE MIX IS TO EXHIBIT A STRENGTH AT LEAST 25% HIGHER THAN THE SPECIFIED VALUE. MINIMUM CEMENT FACTOR TO COMPLY WITH TABLE 10-3. PRELIMINARY TESTS AS A BASIS FOR A PREQUALIFIED MIX TO COMPLY WITH C26-1004.3 a.3. QUALITY CONTROL OF CONCRETE IS TO BE PROVIDED AT THE BATCH PLANT. THE RESULTS OF QUALITY CONTROL AND INSPECTION ARE TO APPEAR ON THE TICKET ACCOMPANYING EACH LOAD OF CONCRETE- C26-1004.3. a.5.
   - D. COMPRESSIVE STRENGTH OF CONCRETE IS TO BE 2500 PSI AT 28 DAYS.
   - E. THREE CYLINDERS SHALL BE TESTED PER FIFTY CUBIC YARDS OR FRACTION THEREOF POURED ON ANY DAY.
   - F. MAXIMUM TENSION IN FOOTING OF PLAIN CONCRETE IS TO BE 70% OF 1.6 F'_c SEC. 2307 (ACI 318-71).
   - G. SHEAR IN FOOTING NOT TO EXCEED 70% OF 2F'_c WHICHEVER IS LOWER AS SPECIFIED IN SECTIONS 1207-1201 (ACI 318-71).
   - H. THE RATIO OF UNSUPPORTED HEIGHT TO THICKNESS OR THE RATIO OF UNSUPPORTED LENGTH TO THICKNESS (WHICHEVER IS GREATER) FOR PLAIN CONCRETE WALLS SHALL NOT EXCEED 20. PLAIN CONCRETE WALLS SHALL BE SO SUPPORTED THAT THE TENSILE STRESS DOES NOT EXCEED 70% OF 1.6 $F'c$ AND THE ALLOWABLE STRESS IN COMPRESSION SHALL BE 70% OF 0.25 $F'c$ FOR WALLS HAVING A RATIO OF HEIGHT TO THICKNESS OF 20. SECTION 2204 (ACI 318-71), AS ADDED BY NEW BUILDING CODE.
   - I. CONCRETE MATERIAL FOR SHORT SPAN FLOOR CONSTRUCTION TO COMPLY WITH C26-1004.8.
   - J. CONCRETE THAT IS TO BE SUBJECTED TO FREEZING TEMPERATURES WHILE WET SHALL HAVE A WATER CEMENT RATIO NOT EXCEEDING 6 GALLONS PER BAG AND IT SHALL CONTAIN ENTRAINED AIR. SEC. 510 (c)- ACI 318-71.
   - Y. EXISTING BORINGS ARE TO BE UTILIZED IN ACCORDANCE WITH SEC. C26-1101.6
   - L. SUPT. OF CONSTRUCTION OR ARCHITECT OR ENGINEER RETAINED BY OWNER ACCEPTABLE TO APPLICANT OF RECORDS SHALL FILE SIGNED COPIES OF ALL INSPECTIONS AND TEST REPORTS WITH THE BUILDING DEPARTMENT INDICATING COMPLIANCE WITH CODE REQUIREMENTS- C26-103,3b.
10. FOUNDATION WALLS TO BE OF PLAIN CONCRETE, SEE NOTE 9, OR APPROVED SOLID LOAD BEARING CONCRETE BLOCKS TO GRADE AS MAY BE REQUESTED BY OWNER (FOR PILE FOUNDATIONS, SEE ENGINEERING DRAWINGS).
11. FOOTINGS TO BE 6" WIDER ON EITHER SIDE OF WALLS ABOVE 12" THICK AND 6" WIDER AT LOT LINES 16" THICK FOR END WALLS AT LOT LINES AND TO BE PLAIN CONCRETE, SEE NOTE 9 (FOR PILE FOUNDATIONS, SEE ENGINEERING DRAWINGS).
12. ALL FOOTINGS TO BE CARRIED AT LEAST 4'-0" BELOW ADJACENT FINISHED GROUND LEVEL, BELOW HOUSE DRAINS AND DOWN TO VIRGIN SOIL. (FOR PILES, SEE ENGINEERING DRAWINGS).
13. WATERPROOFING NOTES: FOR CELLAR AND BASEMENT FOUNDATION WALLS
   - A. BEFORE ANY WATERPROOFING OF FOUNDATION WALLS IS APPLIED, ALL SURFACES SHALL BE DRY, CLEAN AND FREE OF ALL LOOSE MORTAR OR ANY MATERIAL. WHERE THE FOUNDATION WALL IS CONCRETE, ALL THE WIRES SHALL BE CUT AND ALL SPACES AROUND SERVICE PIPES SHALL BE SEALED.
   - B. THE WATERPROOFING OF THE FOUNDATION SHALL BE APPLIED FROM A LEVEL AT THE BOTTOM OF THE FOOTING TO THE LEVEL OF THE FINISHED EXTERIOR GRADE. WHERE FOUNDATION WALLS ARE OF CONCRETE UP TO OR NEAR GRADE LEVEL, THE WATERPROOFING SHALL EXTEND AT [illegible] FINISHED GRADE. WATERPROOFING IS TO CONSIST OF A HEAVY BRUSH COAT OR [illegible] COAT OF A COMMERCIAL [illegible] PREPARATION OR AN APPLICATION OF HOT ROOFING [illegible]. NO BACKFILLING SHALL BE DONE UNTIL THE WATERPROOFING HAS BEEN INSPECTED AND ACCEPTED BY THE DEPARTMENTS INSPECTOR. ONLY CLEAN EARTH SHALL BE USED FOR THE BACKFILLING. BACKFILLING IS TO BE DONE IN SUCH A MANNER AS NOT TO DAMAGE THE WATERPROOFING. BACKFILLING IS TO BE WELL TAMPED AND GRADED TO PITCH AWAY FROM THE FOUNDATION WALLS.
14. NO BACKFILLING AGAINST FOUNDATION WALLS TO BE DONE UNTIL FIRST TIER OF BEAMS ARE IN PLACE.
15. FRONT AND SIDE WALLS OF END BUILDINGS FROM GRADE TO BE 4" BRICK BACKED UP WITH APPROVED SOLID LOAD BEARING CONCRETE BLOCK TO FIRST TIER OF BEAMS, AND 4" BRICK BACKED UP WITH APPROVED LOAD BEARING TO COMPLY WITH SEC. 7.1 OF RS 10-1.
16. ALL PARTY WALL ABOVE FIRST TIER TO BE 8" APPROVED LOAD BEARING CINDER BLOCKS.
17. MORTAR TO COMPLY WITH ASTM C270 1964 AND TABLES RS 10-1-2.
18. ALL STEEL DESIGNED FOR A UNIT STRESS OF 22,000 PSI AND TO MEET THE REQUIREMENTS OF SEC. C26-1005-1 AND RS 10-5.
19. LINTELS SUPPORTING WALLS OVER 4'-0" SHALL BE FIRE PROTECTED WITH MATERIALS HAVING THE REQUIRED FIRE RESISTIVE RATING OF THE WALL SUPPORTED. SEC. C26-502.4. (2" CEMENT PLASTER WITH WIRE LATH)
20. PROVIDE AT LEAST 2½ OF SOLID MASONRY UNDER JOISTS AND AT LEAST 4" UNDER BEAMS, GIRDERED OR OTHER CONCENTRATED LOADS. RS 10.1. SEC. 10.6.1 AND 10.6.2. BEARING OF JOISTS OR BEAMS SHALL BE 3" MINIMUM.
21. BEARING PARTITIONS, IF ANY, TO BE OF 2" x 4" STUDS 16" O.C. WITH DOUBLE STUDS AT ENDS OF OPENINGS, BETWEEN 3'-6" AND 6'-0" AND TRIPLE DOUBLE STUDS AT ENDS OF OPENING OF GREATER WIDTH WITH 2" x 4" PLATES AND 2 - 2X4" TOP PLATES. DOUBLE BEAMS AND SOLID BRIDGING SHALL BE USED BEARING PARTITIONS ALL TO COMPY WITH SEC. C26-1006.6 (a). PROVIDE 5/8" SHEETROCK, FIRECODE "60" BOTH SIDES OF BEARING PARTITION.
22. SUSPENDED CEILINGS SHALL HAVE HANGERS AND SUPPORTING GRIDS OF NONCOMBUSTIBLE MATERIALS, C26-504.12 & RS 5-16.
23. INTERIOR FINISHES TO COMPLY WITH SEC. C26-504-10 & TABLE 5-4.
24. CEILINGS OF CELLARS AND ALL FLOORS TO BE FINISHED WITH 5/8" SHEETROCK FIRECODE "60".
25. BATHROOMS TO HAVE TILED FLOORS AND WAINSCOTS OR AS MAY BE REQUESTED BY OWNER. WALLS ABOVE WAINSCOT TO HAVE B.S.A. APPROVED WALLBOARDS OR PLASTER.
26. WHERE NONCOMBUSTIBLE PIPES AND CONDUITS PASS THROUGH RATED CONSTRUCTION, THE NET AREA OF SUCH OPENING MAY NOT EXCEED 25 SQ.IN IN ANY 100 SQ.FT. OF WALL OR FLOOR AREA. THE SPACE BETWEEN THE PIPE AND ITS SLEEVE OR OPENING MAY NOT EXCEED ½" AND WILL BE PACKED WITH NONCOMBUSTIBLE MATERIAL SUCH AS ROPE ASBESTOS OR MINERAL WOOL. SEC. C26-504.5.
27. CONCEALED SPACES, EXCEPT SHAFTS AND SPRINKLERED SPACES, WITHIN PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRING, PIPE SPACES, ETC. THAT WOULD PERMIT PASSAGE OF FLAME, SMOKE, FUMES, OR HOT GASES FROM ONE FLOOR TO ANOTHER SHALL BE FIRE STOPPED TO FROM AN EFFECTIVE DRAFT BARRIER OR SHALL BE FILLED WITH NONCOMBUSTIBLE MATERIAL.SEC. C26-504.7.
28. CEILING OPENINGS FOR ELECTRICAL OUTLET BOXES AND RECESSED LIGHTING FIXTURES MAY NOT EXCEED 16 SQ.IN. FOR EACH 90 SQ.FT. OF CEILING AREA. THE BOXES MUST BE OF STEEL AT LEAST .022 IN. THICK. SEC. C26-502.2 (a).
29. DOORS ENTERING EACH OFFICE; SHALL HAVE AT LEAST 1 PEEPHOLE OR GLAZED AREA.
30. ALL WINDOWS TO HAVE 50% OPENABLE AREA UNLESS OTHERWISE NOTED ON PLANS.
31. VENT FLUES FOR GAS FIRED BOILERS TO BE "AMERI-VENT" AS APPROVED BY B.S.A. CAL. #294-56-SM. NO DOWN DRAFT CAPS, WHEN INDICATED ON PLAN TO BE "AMERI-CAP" AS APPROVED BY THE B.S.A. CAL#390-62-SM, UNLESS OTHERWISE NOTED
32. WATER DISTRIBUTION SYSTEM PIPING SHALL BE OF RED BRASS, COPPER PIPE, HARD TEMPER TYPE "K" COOPER TUBING, HARD TEMPER TYPE "L" COOPER TUBING, GALVANIZED WROUGHT IRON PIPE OR GALVANIZED STEEL PIPE AS PER SEC. P102.4(1).
33. PLUMBING VENTS SHALL EXTEND ABOVE ROOF AS PER SEC. P109.4 (a).
34. HOUSE DRAINS BELOW GRADE SHALL BE 2'-0" AWAY FROM SIDEWALKS AND ABOVE FOUNDATION WALLS.
35. HEATING TO BE AS REQUESTED BY OWNER. INDOOR TEMPERATURE OF 70°F. AT AN OUTDOOR TEMPERATURE OF 5°F. AND WIND VELOCITY OF 15 MPH AS PER TABLE 12-1.
36. ALL HEATING AND A/C TO COMPLY WITH ART. 12-16 AND N.Y.C. ELEC. CODE.
37. THE HEATING SYSTEM SHALL BE INSTALLED AS PER NFPA - 90B AND TO BE OF GAS HOT WATER HEAT OR STEAM.
38. MAINTAIN CLEARANCES AROUND HEATING EQUIPMENT AS PER RS 14-15.
39. ALL ELECTRICAL OUTLETS TO BE AS PER PLANS AND AS MAY BE REQUIRED BY OWNER AND TO MEET ALL REQUIREMENTS OF THE N.Y.C. ELEC. CODE.
40. ALL ELEVATIONS SHALL BE REFERRED TO U.S. COAST AND GEODETIC SURVEY MEAN SEA LEVEL DATUM OF 1929 CAL. 26-110.3J.
41. A SURVEY, BY A DULY LICENSED SURVEYOR, SHOWING THE LOCATION OF THE BUILDING AND ALL REQUIRED ELEVATIONS, SHALL BE FILED AS PER SEC. C26-[illegible]
42. THE CONTRACTOR MUST OBTAIN A C. OF O. UPON COMPLETION OF ALL WORK ON THIS PLAN TO COMPLY WITH THE BUILDING CODE, SUB. ARTICLE 121.0.
43. CONTROLLED INSPECTION ITEMS:
    1. FIRE STOPPING AS PER C26-504.7g
    2. BORING SEC. C26-1112.2
    3. PILES SEC. C26-1112.3 (IF REQUIRED)
    4. SUBGRADES FOR FOOTINGS, FOUNDATION PIERS AND FOUNDATION WALL SEC. C26-1112.5
    5. CONSTRUCTION AFFECTING SUPPORT OF ADJACENT PROPERTIES WHERE EXCAVATION IS MORE THAN 10'-0" BELOW LEGAL GRADE SEC. C26-1112.6
44. FOUNDATION NOTICES TO ADJOINING OWNERS TO BE COMPLIED WITH AS PER SEC. C26-112.3. 5 DAYS.
45. FOOTINGS WILL MEET FOOTINGS OF ADJOINING PROPERTY, IF NEW FOOTINGS ARE LOWER, THE ADJOINING PROPERTY FOOTING WILL BE UNDERPINNING. UNDERPINNING TO BE FILED UNDER SEPARATE APPLICATION FOR ADJOINING PROPERTY.

STRUCTURAL NOTES

1. FOOTINGS [illegible] BEAR ON UNDISTURBED SOIL HAVING A MINIMUM BEARING CAPACITY [illegible] 4,000 POUNDS PER SQUARE FOOT.
2. THE BOTT[illegible] OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 4' - 0" [illegible]OW OUTSIDE GRADE.
3. FOOTINGS [illegible] BE CENTERED UNDER COLUMNS ABOVE UNLESS OTHERWISE NOTED O[illegible]AN.
4. DO NOT [illegible]FILL AGAINST FOUNDATION WALLS UNLESS THEY ARE PROPERLY [illegible]ACED BY FLOOR SLABS, TEMPORARY SHORING, OR BALANCE[illegible]ILL.
5. SLABS-O[illegible]OUND, WHERE SHOWN ON PLAN TO BE 4" THICK, REINFORCED WITH O[illegible]YER OF 6x6-6/6 W.W.F. AT TOP.
6. ALL CON[illegible] WORK TO CONFORM TO ACI BUILDING CODE (ACI 318-71) AND BE [illegible]CORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILI[illegible] REINFORCED CONCRETE STRUCTURES ACI 315-70 AND SUB-ART[illegible] 1004.0 OF THE NEW YORK CITY BUILDING CODE.
7. ALL CON[illegible] SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,50[illegible].I.
8. NEW FOOT[illegible] ADJACENT TO THE EXISTING BUILDING ARE TO BE BE [illegible] LEVEL OF THE BOTTOM OF THE EXISTING FOOTINGS. IF NEW [illegible]NGS ARE REQUIRED TO BE BROUGHT BELOW THE BOTTOM OF THE [illegible]ING FOOTINGS, THEN UNDERPINNING OF THE EXISTING FOOTING[illegible]L BE REQUIRED.

   UNDERPI[illegible] NOTES:

   WHERE U[illegible]PINNING OF EXISTING FOOTINGS ARE CALLED FOR ON PLAN, T[illegible]NTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PREVENT SETTLE[illegible]OR MOVEMENT OF EXISTING CONSTRUCTION. THE CONTRACTOR SHALL S[illegible] DRAWINGS TO THE ARCHITECT OR ENGINEER SHOWING PROPOSE[illegible]TAILS OF UNDERPINNING AND THE CONTRACTOR SHALL NOT BEGIN U[illegible]PINNING WORK UNTIL THE ARCHITECT OR ENGINEER APPROVES THE DRA[illegible] SUBMITTED BY THE CONTRACTOR. APPROVAL OF THE UNDERPI[illegible] DRAWINGS SHALL NOT RENDER THE ARCHITECT OR ENGINEE[illegible]SPONSIBLE FOR ANY ERRORS IN DIMENSIONS NOR DAMAGES RESULTI[illegible]OM THE PROPOSED SYSTEM OF UNDERPINNING METHODS, PROCEDU[illegible] OF CONSTRUCTION, ETC., ALL OF WHICH SHALL BE THE SOLE RE[illegible]SIBILITY OF THE CONTRACTOR.

   THE SET[illegible] AMENDMENT FOR THE UNDERPINNING SHALL BE FILED WITH TH[illegible]PARTMENT OF BUILDINGS BY THE CONTRACTOR, WHICH WILL REQUIRE [illegible] UNDERPINNING SHOP DRAWINGS TO BE PREPARED BY A LICENSE[illegible]OFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR.
9. FABRICA[illegible] AND ERECTION OF ALL STRUCTURAL STEEL WORK SHALL CONFORM [illegible]THE REQUIREMENTS OF SUB-ARTICLE 1005.0 OF THE NEW YORK C[illegible]ILDING CODE. AN AFFIDAVIT WILL BE REQUIRED FROM THE PR[illegible] OF THE STEEL CERTIFYING THAT ALL STEEL MEETS THE REQ[illegible]ENTS AS DEFINED IN SECTIONS C26-1005.0 TO C26-100[illegible]NCLUSIVE, OF THE NEW YORK CITY BUILDING CODE.
10. ALL ST[illegible] STEEL SHALL CONFORM TO ASTM-A36.
11. CONTRAC[illegible] SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL PRIOR T[illegible]ATION.

[illegible]CTRICAL NOTES

1. ALL W[illegible] CONFORM TO NYC ELECTRICAL CODE & LOCAL REGULA[illegible] SHALL BE PERFORMED BY LICENSED ELECTRICIAN.
2. CONTRA[illegible]SHALL EXAMINE THE [illegible] ELECTRICAL PANEL & TEST ALL TH[illegible]ING CIRCUITS & LIGHTS. CONTRACTOR SHALL INDICATE THE NE[illegible] CONNECTIONS TO [illegible] CIRCUITS.
3. ANY C[illegible]S WITH EXISTING CONDITIONS SHOULD BE BROUGHT TO THE A[illegible]T'S ATTENTION.
4. VERIF[illegible] OWNER'S EQUIPMENT FOR THE REQUIRED ELECTRICAL SERVI[illegible]
5. ALL [illegible] SHALL BE CONCEALED IN WALLS OR CEILING.

PLUMBING & HVAC NOTES

1. ALL [illegible]SHALL CONFORM TO NATIONAL PLUMBING CODE AND NYC BUI[illegible]ODE AND SHALL BE PERFORMED BY LICENSED PLUMBER AND [illegible]ED HVAC INSTALLER.
2. CONT[illegible] SHALL EXAMINE THE EXISTING CONDITIONS AND INVESTIGA[illegible]XACT LOCATIONS OF ALL PIPINGS AND DUCTWORK. CON[illegible]ALL INDICATE THE LOCATIONS OF THE NEW WORK CONNECT[illegible]STING.
3. ANY [illegible]CTS WITH EXISTING CONDITIONS SHOULD BE BROUGHT TO THE[illegible]TECT'S ATTENTION.
4. AL[illegible] SHALL BE CONCEALED IN WALLS, FLOORS OR CEILING.
5. VER[illegible]TH OWNER'S EQUIPMENT FOR THE REQUIRED CONNECTIONS.
6. [illegible]CE SHALL BE PERFORMED AFTER THE COM[illegible]
7. [illegible] THE TESTING AND APPROVAL OF PIPING WORK [illegible]TIES.
8. [illegible]C FLOORS, WALLS, AND CEILING TO THE STANDARDS [illegible]
9. [illegible]CTRATION THROUGH FLOORS, WALLS, CEILING[illegible]
10. [illegible]HK THROUGH FIRE RATED PARTITIONS SHOULD HAVE FIRE [illegible]

133-10 TO 133-22 39TH AVE.
FLUSHING NY

RAYMOND CHAN ARCHITECT

DEPARTMENT OF BUILDINGS
BOROUGH QUEENS
NO. [illegible]
APPROVED
DATE [illegible]

[illegible] AVE. FLUSHING NY 11354
[illegible] Fax 718-[illegible]

PROJECT MANAGER
R.C.

JOB NUMBER
9865

DRAWN BY
S.T.

DATE
7/19/99

FOUNDATION NOTES

1. FOOTINGS TO BEAR ON UNDISTURBED SOIL HAVING A MINIMUM BEARING CAPACITY OF 6,000 POUNDS PER SQUARE FOOT (3 TONS).
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A BE A MINIMUM OF 4'-0" FEET BELOW OUTSIDE GRADE.
3. ELEVATION OF BOTTOM OF FOOTINGS SHOWN ON FOUNDATION PLAN ARE BASED ON THE BORINGS AND CONSTITUTE THE BEST AVAILABLE INFORMATION. IT MAY BE NECESSARY TO LOWER THE FOOTINGS DUE TO FIELD CONDITIONS IN ORDER TO REACH ADEQUATE BEARING MATERIALS. FOOTINGS SHALL NOT BE CONSTRUCTED UNTIL SOIL PREPARED FOR BEARING HAS BEEN APPROVED BY SUPERVISING SOILS ENGINEER.
4. FOOTINGS TO BE CENTERED UNDER COLUMN ABOVE UNLESS OTHERWISE NOTED.
5. DO NOT BACKFILL AGAINST FOUNDATION WALLS UNLESS THEY ARE PROPERLY BRACED BY FLOOR SLABS, TEMPORARY SHORING OR BALANCED FILL.
6. SLABS ON GROUND, WHERE SHOWN ON PLAN TO BE 4" THICK REINFORCED WITH ONE LAYER OF 6" X 6" - #10 / #10 WELDED WIRE FABRIC AT TOP. LOWER ARCADE SLAB TO BE 5" THICK REINFORCED WITH 6" X 6" - #6 / #6 WELDED WIRE FABRIC AT TOP. SLABS ON GRADE TO BE PLACED ON ALTERNATING (CHECKERBOARD) SEQUENCE WITH KEYED CONSTRUCTION JOINTS. SLABS TO BE PLACED ON UNDISTURBED SOIL.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO WITH ACI BUILDING CODE (ACI 318) AND BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES (ACI 315) AND SUB ARTICLE 1004 OF THE NEW YORK CITY CODE.
2. MINIMUM CONCRETE STRENGTH AT 28 DAYS SHALL BE F'c = 3000 p.s.i.
3. CONCRETE TO BE SUPPLIED ON THE BASIS OF A PREQUALIFIED MIX FOR THE STRENGTH SPECIFIED.
4. CONCRETE AND AGREGATES TO CONFORM TO THE FOLLOWING STANDARDS:
   A. PORTLAND CEMENT AS PER ASTM C150.
   B. AIR ENTRAINING PORTLAND CEMENT AS PER ASTM C175.
   C. CONCRETE AGREGATES AS PER ASTM C33.
   D. WATER SHALL BE FREE AND CLEAN FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATTER ETC.
   E. ALL REINFORCING BARS TO CONFORM TO ASTM A615, GRADE 60 AND WELDED WIRE FABRIC TO ASTM A82 AND A185.
5. THE MINIMUM NUMBER OF BAGS OF CEMENT PER CUBIC YARD SHALL BE 6.50. THE SLUMP SHALL NOT EXCEED 5" PLUS OR MINUS 1".
6. THREE TEST CYLINDERS SHALL BE MOULDED FOR EACH FIFTY (50) CUBIC YARDS OR FRACTION THEREOF PLACED ON ANY ONE DAY. SAMPLES SHALL BE TAKEN DIRECTLY FROM THE MIXER AS PER ASTM C172, CURED AS PER ASTM C31 AND TESTED AT 7 AND 28 DAYS AS PER ASTM C39. ALL TESTING SHALL BE MADE BY A LICENSED TESTING LABORATORY. REPORTS ARE TO BE FILED WITH THE BUILDING DEPARTMENT AS PER N.Y. CITY CODE.
7. ALL SLABS ARE TO FINISHED AS PER ARCHITECTURAL DRAWINGS.
8. GROUT FOR STEEL COLUMNS TO BE NON-SHRINK.
9. NO HORIZONTAL CONSTRUCTION JOINTS SHALL BE PERMITTED.
10. FOUNDATION WALLS AND GRADE BEAMS SHALL BE WATERPROOFED WITH A DOUBLE COAT OF ASPHALT EMULSION.
11. OWNER AND/OR CONTRACTOR SHALL RETAIN A TESTING LABORATORY AND A LICENSED PROFESSIONAL TO PROVIDE CONTROLLED INSPECTIONS AND ALL CONCRETE TESTING. THIS OFFICE HAS NOT BEEN ENGAGED TO SUPERVISE CONSTRUCTION.

REINFORCING BAR NOTES

1. ALL CONTINUOUS REINFORCING BARS TO BE LAPPED 36 BAR DIA. AT SPLICES AND CORNERS, UNLESS OTHERWISE INDICATED. LAP CONTINUOUS TOP BARS AT CENTER (BETWEEN SUPPORTS) AND BOTTOM BARS AT SUPPORTS. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS ENDS WITH STANDARD HOOKS. SPLICES SPACED CLOSER THAN 12 BAR DIA. TO EACH OTHER OR 6" FROM ANY OUTSIDE EDGE SHALL BE INCREASED TO 43 BAR DIA. (20%).
2. PROVIDE CORNER BARS AT WALL INTERSECTIONS.
3. PROVIDE 1-#5 BAR X 3'-0" LONGER THAN OPENING FOR EACH 4" OF WALL THICKNESS. OVER ALL OPENINGS UNLESS OTHERWISE INDICATED.
4. ALL BARS SHALL BE SECURELY HELD IN POSITION WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED BY CONTRACTOR AS REQUIRED IN ORDER TO PROPERLY FURNISH SUPPORT FOR ALL BARS.
5. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS:
   A. FOOTINGS AND ALL MEMBERS PLACED DIRECTLY ON GROUND - 3"
   B. CONCRETE, THAT AFTER REMOVAL OF FORMS IS IN CONTACT WITH THE GROUND OR EXPOSED TO THE WEATHER-2" FOR BARS LARGER THAN #5, AND 1 1/2" FOR #5 BARS OR SMALLER.
   C. SLABS AND WALLS NOT EXPOSED TO WEATHER OR GROUND- 3/4"
   D. BEAMS AND GIRDERS NOT EXPOSED TO WEATHER OR GROUND- 1 1/2"
6. CONTRACTOR SHALL PROVIDE FOR ALL BEAMS AND COLUMNS. IN ADDITION, CONTRACTOR SHALL INSTALL ALL PIPE SLEEVES, BOXED OPENINGS, ANCHOR BOLTS ETC. AS REQUIRED FOR THE VARIOUS TRADES.
7. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
8. THIS OFFICE HAS NOT BEEN RETAINED TO PROVIDE FIELD SUPERVISION, NOR CONTROLLED INSPECTIONS AS PER N.Y. CITY BUILDING CODE.

MASONRY NOTES

1. GENERAL MASONRY WORK HAS BEEN DESIGNED IN ACCORDANCE WITH THE EMPIRICAL PROVISIONS OF THE N.Y. CITY BUILDING CODE AND IS NOT SUBJECT TO CONTROLLED INSPECTIONS.
2. CONCRETE MASONRY UNITS TO BE GRADE P FOR MODERATE EXPOSURE AND GRADE G FOR NO EXPOSURE f'm = 1,200 p.s.i.
3. ALL MASONRY SHALL CONFORM AS FOLLOWS:
   A. BRICK AS PER ASTM C 216.
   B. SOLID LOAD BEARING BLOCK AS PER ASTM C145.
   C. HOLLOW LOAD BEARING BLOCK AS PER ASTM C90.
   D. HOLLOW LOAD BEARING BLOCK AS PER ASTM C129.
4. MORTAR SHALL COMPLY WITH ASTM C270, TYPE M, AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 p.s.i.
5. UNDER LINTELS AND/OR STEEL BEAMS FILL VOIDS IN CONCRETE BLOCK WITH HIGH STRENGTH GROUT FOR A HEIGHT OF 2 COURSES, MINIMUM.
6. PROVIDE HORIZONTAL TRUSS REINFORCEMENT EVERY OTHER COURSE.
7. ALL MASONRY SHALL BE ANCHORED TO ADJACENT STEEL BEAMS WITH AN APPROVED TYPE OF ANCHOR.
8. ALL INTERSECTING MASONRY WALLS SHALL BE BONDED AND ANCHORED TO EACH OTHER.
9. ALL MASONRY UNITS SHALL BE THOROUGHLY WET BEFORE LAYING.

FLUSHING BLUEPRINT INC.

PRECAST PLANK NOTES

1. TYPICAL FLOOR AND ROOF SYSTEM SHALL BE 8" PRECAST HOLLOW CORE SLABS WITH PRETENSIONED REINFORCEMENT.
2. ALL PRECAST SLABS SHALL CONFORM TO ALL REQUIREMENTS OF A.C.I. AND NEW YORK CITY BUILDING CODES.
3. REINFORCEMENT SHALL CONSIST OF MULTIPLE WIRE STRESS RELIEVED HIGH TENSILE STRAND PRETENSIONED IN ACCORDANCE WITH THE STATED DESIGN PARAMETERS.
4. CONCRETE MATERIALS SHALL CONFORM WITH THE PREVIOUSLY STATED REQUIREMENTS. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 6,000 p.s.i.
5. PROVIDE ANCHORAGE TO STRUCTURE AS SHOWN ON DRAWINGS AND AS PER MANUFACTURERS SUGGESTED DETAILS.
6. ALL PRECAST SLABS SHALL BE 2 HOUR RATED AND SHALL HAVE B S A NUMBER.
7. WELD PLATES, WHERE INDICATED ON DRAWINGS, SHALL BE INCORPORATED INTO MEMBERS AT TIME OF PLACEMENT OF CONCRETE.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS. CONTRACTOR SHALL REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR LOCATION OF OPENINGS, RECESSES ETC.
9. ALL OPENINGS LARGER THAN 14" PERPENDICULAR TO SPAN OF PRECAST SLAB SHALL RECEIVE A STEEL HEADER FOR THE SUPPORT OF THE CUT SLAB.
10. PRECAST SLAB CONTRACTOR SHALL GROUT ALL JOINTS BETWEEN UNITS, AND ALL SPACES WHERE SLABS MEET SUPPORTING MEMBERS. ALL JOINTS SHALL BE CLEANED PRIOR TO PLACEMENT OF GROUT. GROUT SHALL BE HIGH STRENGTH.

STRUCTURAL STEEL NOTES

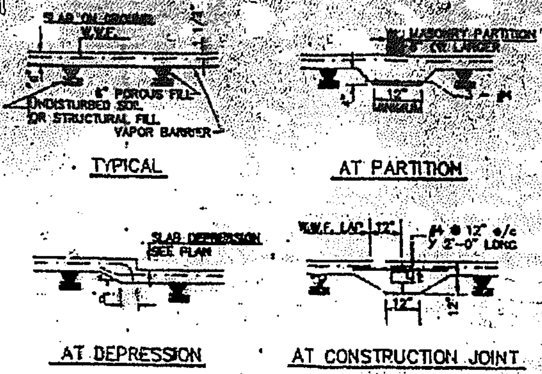
1. FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE A.I.S.C. SPECIFICATION FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS - LATEST EDITION AND SUB ARTICLE 1005 OF THE N.Y. CITY BUILDING CODE. AN AFFIDAVIT WILL BE REQUIRED FROM THE PRODUCER OF THE STEEL CERTIFYING THAT ALL STEEL MEETS THE REQUIREMENTS AS DEFINED IN SECTIONS C26-1005.6 TO C26-1005.3 INCLUSIVE, OF THE N.Y. CITY BUILDING CODE.
2. ALL STEEL SHALL CONFORM TO ASTM DESIGNATION A-36.
3. CONTRACTOR SHALL FILE AN AFFIDAVIT FROM THE PRODUCER OF THE STRUCTURAL STEEL CERTIFYING THAT THE STEEL MEETS THE REQUIREMENTS OF ASTM DESIGNATION A-36.
4. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STEEL FRAME IN ALIGNMENT AND COLUMNS PLUMB, UNTIL DECK AND WALLS ARE IN PLACE.
5. ALL CONNECTIONS TO BE ADEQUATE TO CARRY THE REACTIONS DUE TO MAXIMUM UNIFORMLY DISTRIBUTED LOAD THAT THE BEAM IS CAPABLE OF SUPPORTING FOR ITS SPAN BASED ON THE A.I.S.C. SAFE LOAD TABLES. ALL CONNECTIONS TO BE SINGLE STANDARD SHEAR CONNECTIONS WHERE POSSIBLE.
6. ALL HIGH STRENGTH BOLTS TO BE FRICTION TYPE, A-325F, 3/4" DIA. MINIMUM.
7. ALL SHOP CONNECTIONS TO BE WELDED OR HIGH STRENGTH BOLTED.
8. FIELD CONNECTIONS MAY BE MADE WITH A-307, 3/4" DIA. COMMON BOLTS EXCEPT AS FOLLOWS:
   A. FOR MEMBERS FRAMING INTO COLUMNS OR WITHIN 24" OF COLUMNS, USE HIGH STRENGTH BOLTS.
   B. WHERE HIGH STRENGTH BOLTS OR WELDS ARE CALLED FOR ON DRAWINGS.
9. BEARING ENDS OF COLUMNS SHALL BE MILLED TO COMPLETE TRUE BEARING.
10. PROVIDE MASONRY ANCHORS AS REQUIRED AND AS SHOWN ON DRAWINGS.
11. ALL STEEL TO RECEIVE ONE SHOP COAT OF PAINT.
12. SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE FABRICATION.

UNDERPINNING NOTES

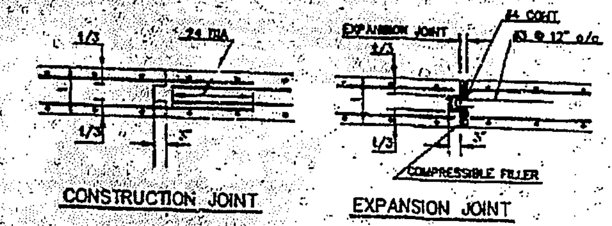
1. WHERE UNDERPINNING OF EXISTING FOOTINGS IS REQUIRED THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PREVENT SETTLEMENT OR MOVEMENT OF EXISTING ADJACENT CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PREPARED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR TO THE ARCHITECT SHOWING PROPOSED DETAILS OF UNDERPINNING. THE CONTRACTOR SHALL NOT BEGIN UNDERPINNING WORK UNTIL THE ARCHITECT APPROVES THE SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR. APPROVAL OF THESE SHOP DRAWINGS SHALL NOT RENDER THE ARCHITECT RESPONSIBLE FOR ANY ERRORS OR DAMAGES RESULTING FROM THE PROPOSED UNDERPINNING SYSTEM OF UNDERPINNING, METHODS, PROCEDURES OF CONSTRUCTION ETC., ALL OF WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

A SEPARATE AMENDMENT FOR THE UNDERPINNING SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS AS REQUIRED BY LAW.

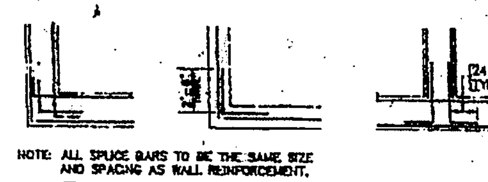
THIS OFFICE HAS NOT BEEN RETAINED TO PREPARE ANY DOCUMENTS RELATING TO UNDERPINNING NOR TO SUPERVISE ANY PART OF THE UNDERPINNING PROCEDURES.



TYPICAL SLAB ON GRADE DETAILS

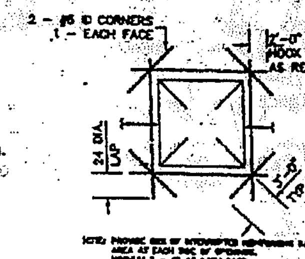


VERTICAL JOINT DETAILS IN CONCRETE WALLS

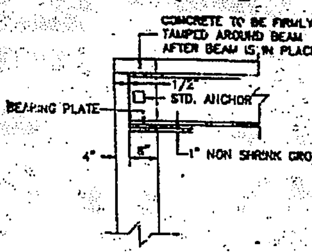


NOTE: ALL SPLICE BARS TO BE THE SAME SIZE AND SPACING AS WALL REINFORCEMENT.

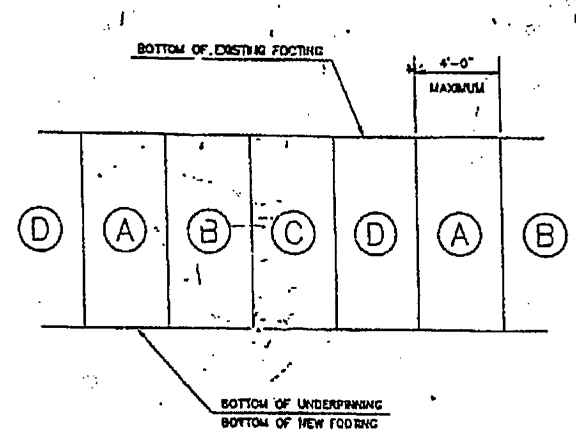
TYPICAL REINFORCEMENT DETAILS AT CORNERS OF CONCRETE WALLS



REINFORCEMENT AT WALL OPENINGS



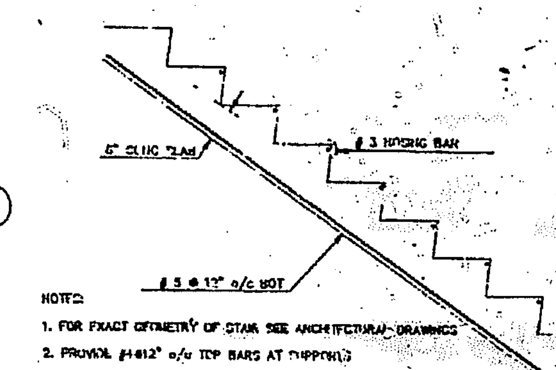
TYPICAL SECTION AT BEAM POCKETS



NOTES

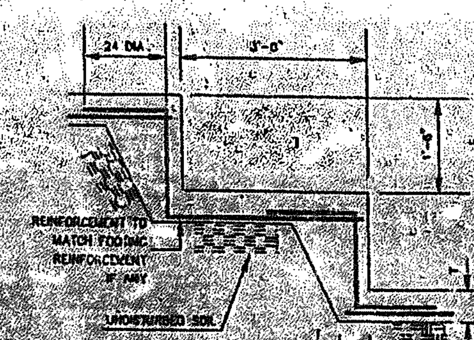
UNDERPINNING SHALL BE DONE IN SECTIONS. MAXIMUM CUT SHALL BE 4'-0" WIDE. SUCCESSIVE OR SIMULTANEOUS CUTS SHALL HAVE AT LEAST 12'-0" OF CLEAR DISTANCE BETWEEN THEM. EXCAVATE AND PLACE PANELS "A" FIRST, "B" SECOND, "C" THIRD AND "D" LAST.

TYPICAL ELEVATION OF UNDERPINNING



NOTES:
1. FOR EXACT GEOMETRY OF STAIR SEE ARCHITECTURAL DRAWINGS
2. PROVIDE #4@12" o/c TOP BARS AT SUPPORTS

TYPICAL CONCRETE STAIR DETAIL



TYPICAL DETAIL AT STEPPED FOOTING

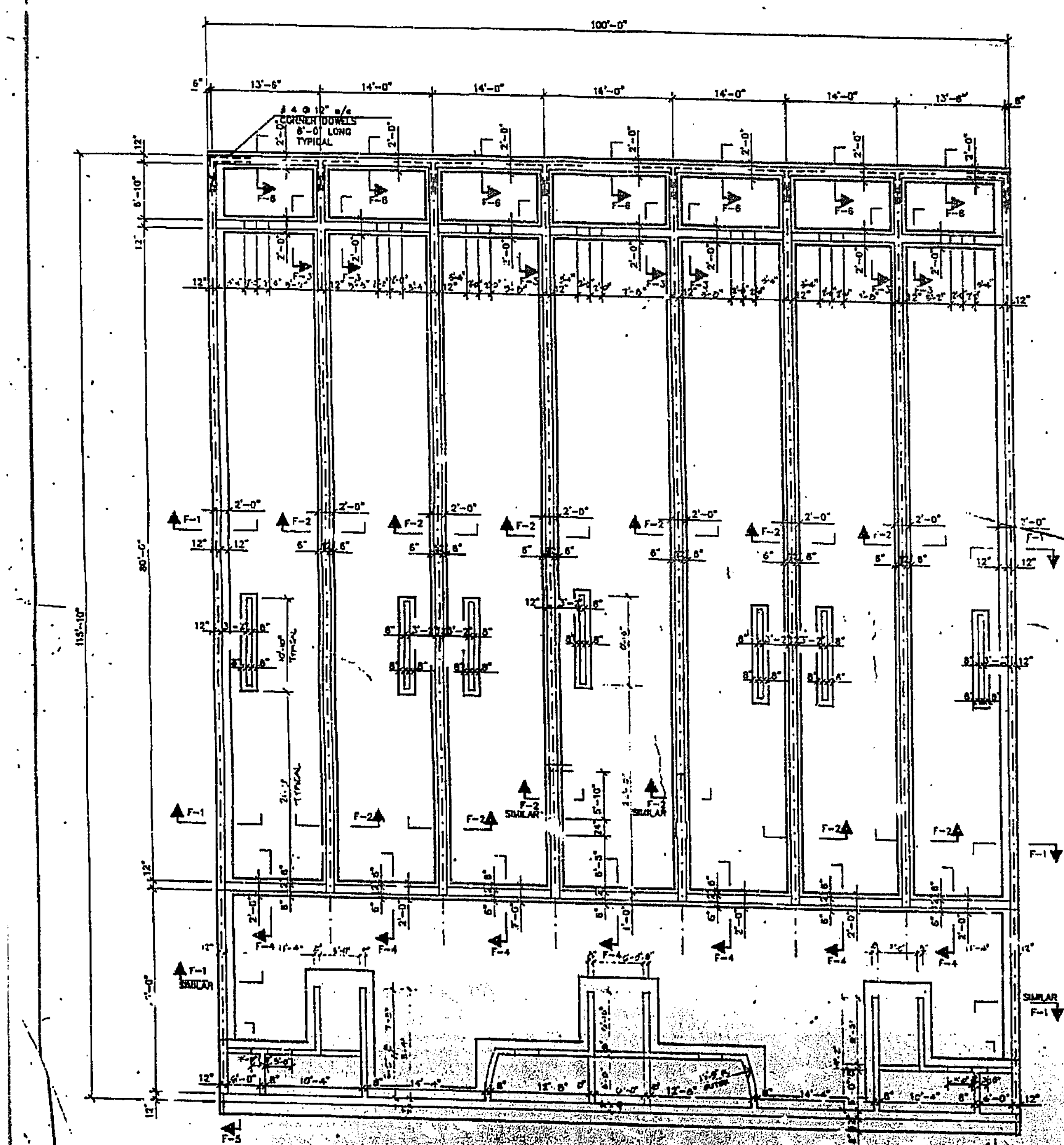
NO.	DESCRIPTION	DATE

133-10 TO 133-22 39TH AVE.
FLUSHING NY

RAYMOND CHAN ARCHITECT

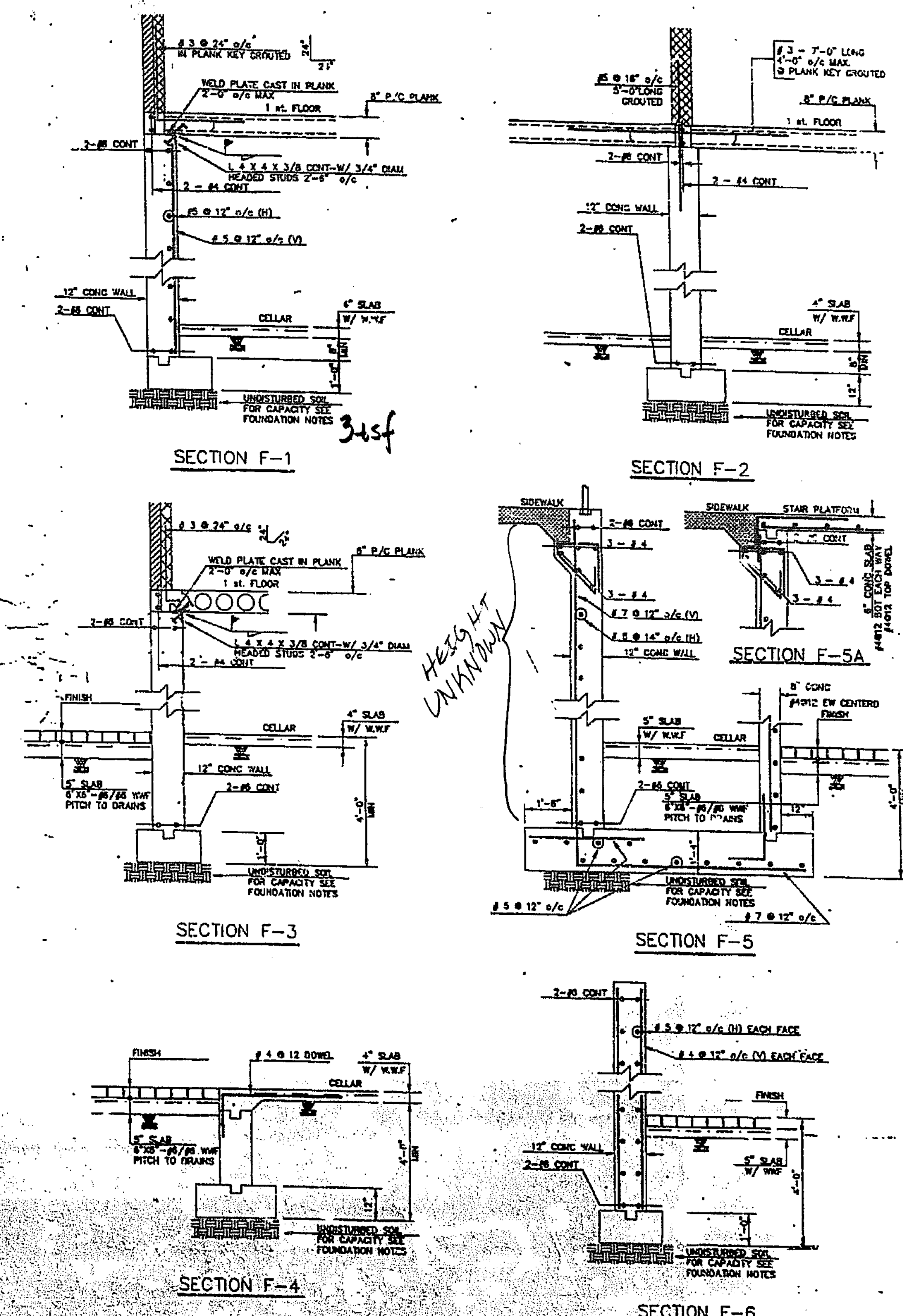
DEPARTMENT OF BUILDINGS BOROUGH QUEENS — APPROVED

PROJECT MANAGER: R.C.
SHEET NUMBER
JOB NUMBER: 9865
DRAWN BY: S.T.
DATE: 7/19/98



FOUNDATION PLAN

SCALE 1/8" = 1'-0"



NOTES

1. CELLAR SLAB TO BE 6" THICK REINFORCED WITH 6"X6" - #10/#10 WELDED WIRE FABRIC (TOP). LOWER ARCADE SLAB TO BE 5" THICK REINFORCED WITH 6"X6" - #6/#6 WELDED WIRE FABRIC TOP.
2. REFERENCED (DATUM) ELEVATION IS TOP OF SLAB ELEVATION 0'-0" EQUAL TO PROJECT ELEVATION ______.
3. FOR TOP OF WALL ELEVATIONS SEE SECTIONS AND ARCHITECTURAL DRAWINGS.
4. TOP OF FOOTINGS TO BE 1'-0" BELOW TOP OF SLAB. STEP FOOTINGS AS REQUIRED IN ORDER TO PROVIDE ADEQUATE FROST PROTECTION AS PER FOUNDATION NOTES AND TYPICAL DETAILS.

REV. NO.	DESCRIPTION	INIT	DATE

133-10 TO 133-22 39TH AVE.
FLUSHING NY

RAYMOND CHAN ARCHITECT

DEPARTMENT OF BUILDINGS BOROUGH QUEENS NO. 401584/01 APPROVED DATE 8/20/99

PROJECT MANAGER
R.C.

SHEET NUMBER

JOB NUMBER
9555

DRAWN BY
S.T.

DATE
7/19/99